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THE

ZOOLOGICAL RECORD

VOLUME THE FIFTY-NINTH

BEING

RECORDS OF ZOOLOGICAL LITERATURE

RELATING CHIEFLY TO THE YEAR

1922

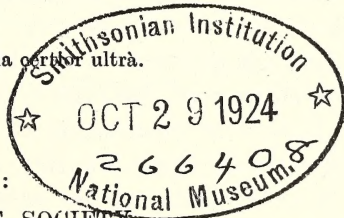
COMPILED FOR THE ZOOLOGICAL SOCIETY OF LONDON WITH ASSISTANCE FROM
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W. H. T. TAMS, W. L. SCLATER, A. K. TOTTON, MISS H. M. MUIR WOOD,
H. M. WOODCOCK AND THE IMPERIAL BUREAU OF ENTOMOLOGY.

SUPERINTENDED BY

W. L. SCLATER, M.A., F.L.S.

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Papers and Memoirs intended for this work should be addressed to "THE EDITOR of the Zoological Record, Zoological Society, Regent's Park, London, N.W. 8." It is earnestly requested that in the case of separately-printed copies of papers so forwarded, the *original pagination* may be indicated.

PREFACE.

THE present volume of the Zoological Record closely resembles its predecessor. The only change of any importance is that in the Section ARACHNIDA, all the titles referring to that group have been placed together in one list, as has always been done in the case of the Insecta.

There have been one or two changes among the Recorders. The Brachiopoda and Bryozoa have been undertaken by Miss H. M. Muir Wood, M.Sc., in place of Mr. W. N. Edwards, and we are glad to be able to state that the Imperial Bureau of Entomology have consented to become responsible for the Insecta and that part for the present year has been compiled by the staff of the Bureau with the help of Messrs. N. D. Riley and W. H. T. Tams. Neither Miss Procter nor Mr. Hinton found themselves able to undertake the Reptiles and Mammalia respectively in the present volume, and the record for these groups have been compiled by the Editor, Mr. W. L. Slater.

After the publication of Vol. 58 (literature of 1921) the Zoological Society made it known that in view of the greatly increased cost of production, it would cease issuing the Record unless it received substantial help from institutions and persons directly interested in zoological bibliography. The Society, in addition to providing the office accommodation and clerical work associated with publication, is prepared for the present to make an annual contribution of £500 towards the cost of the Record. Donations or promises, of which a list is appended, amounting to a total of £684 17s. 0d., have been received in respect of Vol. 59, now issued. It is hoped that this sum, together with the Society's contribution of £500 will leave a balance of receipts over expenditure which will be carried over towards the cost of Vol. 60. The Society, to prevent delay, has already sanctioned the compilation of Vol. 60 and of the next volume (61, literature of 1924), but the question of publication must again be held over until support has been secured. So far, the only gifts or promises towards

the publication of Vol. 60, in addition to any balance that may be carried forward and the Society's own contribution of £500, are £20 from the Society of Tropical Medicine and Hygiene and £5 5s. from the Challenger Society. The Imperial Entomological Bureau, which undertook the compilation of *INSECTA* for Vols. 59 and 60, on receipt of the usual recorders' fees, has now agreed to undertake the same work for Vol. 61 without payment—a most welcome support of moral and material value.

The Zoological Society has received widespread testimony as to the value of the Record to Zoological Science. But it has again to insist that such testimony, although agreeable, will not secure the continuance of the Record unless it assume the practical form of more subscriptions to the whole volume and the separate divisions, and donations towards the deficit.

P. CHALMERS MITCHELL, *Secretary*.

Zoological Society of London.

July, 1924.

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EXPLANATORY.

This Volume is printed in the Divisions enumerated on p. vi.

The pagination of each Division is separate, and is given at the left-hand top corner of the pages. The number and name of the Division is given as a heading on each page. The date 1922 corresponding to the bulk of the literature indexed is given at the top of each page.

In the Subject Index of each Division authors are quoted by name only. The full references will be found in the Title Section of the Division.

The Literature indexed is mainly that of 1922 but includes entries for earlier years that have been received too late for inclusion in previous volumes.

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LIST OF ABBREVIATIONS WITH TITLES OF JOURNALS.

I. COMPREHENSIVE ZOOLOGY

BY

W. L. SCLATER.

This section includes works that deal with more than one branch of Zoology, or that are of general interest to Zoologists. It is, therefore, not complete in itself as regards any one subject included in it. The special records complete each subject. A few memoirs included in the special records are repeated in this division.

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II. PROTOZOA

ARRANGED BY

H. M. WOODCOCK, D.Sc.

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[Vacant.]

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Neoactinomyxum gen. n. *globosum* sp. n. from *Limnodrilus*, GRANATA Monit. zool. ital. 33 pp. 193–196 2 text-figs.

Triactinomyxon magnum sp. n. from *Limnodrilus*, GRANATA Monit. zool. Ital. 33 pp. 174–179.

(f) **Sarcosporidia.**

Sarcocystis bubalis p. 9 pl. i figs. 1–4, *woodhousi* p. 12 figs. 5–8, spp. n., from antelopes, DOGIEL Sci. Res. Zool. Exped. Brit. E. Afr. 1914 1 No. 8.

(g) **Haplosporidia.**

Bertramia beauchampi sp. n. from *Conochilus*, life-cycle, TEMPELL Arch. Protistenk. 43 pp. 355–360 18 text-figs.

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(a) **Flagellata.**

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Astasia sp. from *Trilobus gracilis*, note on, NIESCHULZ Zool. Anz. 54 p. 137 3 text-figs.

Bernardinella bipyramidata gen. et sp. n., PASCHER Arch. Protistenk. 44 pp. 405 & 406 fig. 13.

Bodo parvulus sp. n., SECKT Bol. Ac. nac. Ci. 25 p. 452 text-fig. 26.—*B. portuensis* & *muris* spp. n., occurrence, morphology, division, MELLO, PINTO NUNES & LIMA RIBEIRO C.R. soc. Biol. 87 pp. 699-701.

Bommeria viridis gen. et sp. n. Kufferath, PASCHER Arch. Protistenk. 44 p. 130 text-fig. 12.

Calycomonas ovalis sp. n. Barents Sea, WULF Wiss. Meeresunters. Abt. Helgoland N. F. 13 p. 111 fig. 20.

Carteria oliveri sp. n. West, PASCHER Arch. Protistenk. 44 p. 122 text-fig. 3.—*C. phaseolus*, *excentrica* spp. n. Printz, PASCHER Arch. Protistenk. 45 pp. 264, 265 text-figs. 1, 2.

Chilomastix mesnili, amoeboid form, BRUG Bull. Soc. Path. exot. 15 p. 135.

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Chlorogonium bernardinense sp. n. Chodat, PASCHER Arch. Protistenk. 44 p. 400.

Chlorotriangulum minutum gen. et sp. n. Kufferath, PASCHER T. c. p. 141 text-fig. 10.

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Waskia belostomae sp. n., BRUG Bull. Soc. Path. exot. 15 p. 134 text-fig. 2.

(b) Silicoflagellata.

[Vacant.]

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Peridinida from Plymouth, notes, LEBOUR J. Mar. Biol. Ass. N. S. 12 pp. 795-818 20 text-figs.

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Syndinium rostratum, *corycoei*, *turbo* & *minutum* *spp. n.*, characterized by the spores and their changes, CHATTON C.R. Acad. Sci. 174 p. 127.

5. CILIOPHORA (INFUSORIA).

(a) Ciliata.

Infusoria from Mortensen's Pacific Expedition 1914-1916, with new forms, DONS Videns. Medd. 73 pp. 49-84 33 text-figs.

Ciliates, f.w., India, notes, BHATIA J. R. Microsc. Soc. 1922 pp. 27-36.

Holotrichous Ciliate (cf. *Pleuronema* or *Cyclidium*), pathogenic to *Theobaldia* described, MACARTHUR J. Royal Army Medical Corps 38 pp. 83-92 5 text-figs.

Balanion *gen. n.* (*Strombidiidae* *comatum* *sp. n.* North Sea and elsewhere, WULFF Wiss. Meeresunters. Abt. Helgoland N. F. 13 p. 116 fig. 26.

Balanidium blattarum *sp. n.*, GHOSH Parasitol. 14 pp. 15 & 16 1 text-fig.—*B. ovatum* *sp. n.* also from cockroach, GHOSH Parasitol. 14 p. 371 1 text-fig.—*B. suis* *sp. n.* & *B. coli* from pigs, structure and behaviour with special reference to the neuromotor apparatus, McDONALD Univ. Cal. Publ. Zool. 20 pp. 243-300 pls. xxvii & xxviii.

Coleps kenti *sp. n.*, India, notes, BHATIA J. R. Microsc. Soc. 1922 p. 28.

Colpidium colpoda (Ehrbg.) compared with *C. campylum* (Stokes), BRESSLAU Zool. Anz. 55 pp. 21-28 4 text-figs.

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Folliculina boltoni Kent, Montevideo, described, THOMSEN Arch. Protistenk. 44 pp. 83-98 17 text-figs. and Physis 5 pp. 171-183 17 figs.

Hypocomides *gen. n.* (related to *Ancistridae* rather than *Acinetaria*) *modiolariae*, *mytili* *spp. n.*, morphology affinities, CHATTON & LWOFF C.R. Acad. Sci. 175 pp. 787-790. [Vide etiam Suctorina.]

Intoschellina rhynchelmis *sp. n.* described, DEBAISIEUX Ann. Soc. sci. Bruxelles 40 pp. 261-266 (sections) 3 text-figs.

Lohmanniella stellaris *sp. n.* Finland, LEEGAARD Act. Soc. sci. Fenn. 48 No. 5 p. 25 text-fig. 24.

Micropoculum *gen. n.* (near *Cothurnia*) p. 73, *bacchi* p. 74 text-fig. 23, *maenadium* p. 75 fig. 24, *spp. n.* Pacific, DONS Vid. Medd. 73.

Opalina japonica *sp. n.* structure and nuclear division, SUGIYAMA J. Coll. Agric. Tokyo 6 No. 4 pp. 361-390 3 pls.

Sphaerotrichium *gen. n.* (near *Strombidium*) *elegans* *sp. n.* Barents Sea, WULFF Wiss. Meeresunters. Abt. Helgoland N. F. 13 p. 116 fig. 25.

Strombidium clavellinae *sp. n.* Holland, morphology, BUDDENBROCK Arch. Protistenk. 45 pp. 129-132 3 text-figs.—*S. minutum* fig. 23, *virgatum* p. 115, *spp. n.* Barents Sea, WULFF Wiss. Meeresunters. Helgoland N. F. 13.

Vorticella mortenseni p. 56 text-figs. 2 & 3, *robusta* p. 57 fig. 4, *tenuinucleata* p. 58 figs. 5 & 6 *spp. n.* Pacific, DONS Vid. Medd. 73.

(b) Suctorina (Tentaculifera.)

Acinetopsis tentaculata *sp. n.* from Woods Hole, Root Trans. Amer. Microsc. Soc. 41 pp. 77-81 1 pl.

Hypocomidae related rather to Ciliata (*Ancistridae*), CHATTON & LWOFF C.R. Acad. Sci. 175 pp. 787-790. [Vide Ciliata.]

Paracineta limbata *form. n. convexa* p. 77 text-figs. 28-30 Aucklands, DONS Vid. Medd. 73.

Pelecypophrya *gen. n.* (*Sphenophryidae*) *tapetis* *sp. n.* morphology, affinities, CHATTON & LWOFF C.R. Acad. Sci. 175 pp. 915-917 7 text-figs.

Sphenophryidae also have no true relation with *Acinetaria*, but should be placed along with the *Hypocomidae* near the *Ancistridae* (*Holotricha*), CHATTON & LWOFF T.c. pp. 1444-1447 3 text-figs.

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Amoeba-like organism, kidneys of a child, different forms described, JACKSON J. inf. diseases 30 pp. 636-642 2 pls.

Dermocystidium ranae sp. n. stages in life-cycle, GUYÉNOT & NAVILLE Rev. Suisse Zool. 29 pp. 133-145 5 text-figs.

Grahamella rhesi, from red corpuscles of *Macacus*, LÉGER Bull. Soc. Path. exot. 15 pp. 679 & 680.

Nicolli gen. n. [author appears unaware this name is praecoc.] *aggregata* sp. n., an alleged Protozoan of uncertain affinity, regarded as the cause of typhus-fever, KRITSCHESKY Centralbl. Bakt. Abt. 1 87 Orig. pp. 526-532 4 text-figs.

III. PORIFERA OR SPONGIDA

ARRANGED BY

H. M. WOODCOCK, D.Sc. (LOND.).

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IV. COELENTERATA

ARRANGED BY

A. KNYVETT TOTTON.

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†*Cladochonus magnus* sp. n. fig. GERTH Jaarb. Mijnwez. Nederl. 49, p. 16.

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†*Coptodiscus mengaudi* [? sp. n.] Upper Cretaceous Spain, LAMBERT Ann. soc. linn., Lyon 66 p. 12 pl. ii figs. 4, 7.

†*Cotteaudia*, LAMBERT 114 p. 10.

†*Cyathocidarid*, STEFANINI 170a p. 131.

†*Cyphosoma*, ADKINS 1 p. 103.—*C.*, BERRY & STINGEWALD 12 p. 58.

†*Desorella*, FAURE-MARGUERIT 62 p. 31.

†*Diplocidarid*, FAURE-MARGUERIT 62 p. 29.

†*Diplopodia* with *D. pachecoi* [? sp. n.] Cretaceous Spain, LAMBERT Trab. Mus. Nac. Ci. Nat. 28 pp. 7, 26 pl. i fig. 7.—*D.*, CHECCHIA-RISPOLI 31 p. 8.—*D.*, FISCHER 64.—*D.*, HOPPE 92.—*D.*, LAMBERT 114 p. 5.

†*Discoidea*, JACKSON 96 p. 29.

†*Discoides*, LAMBERT 114 p. 12 & 116 p. 11.

Dorocidarid affinis, CHECCHIA-RISPOLI 26.

†*Echinanthus*, LAMBERT 115.

Echinarachnius parma, HIBBARD 91.—*E. p.*, OHSIMA 144.

†*Echinarachnius sebastiani* Oligocene W. Indies, JACKSON Carnegie Inst. Pub 306 p. 48 pl. vii figs. 5, 6.

Echinobrissus, MORTENSEN 136 pp. 143, 184.

†*Echinobrissus* with *E. cremai*, *franchii* [? spp. n.] Cretaceous Tripoli, CHECCHIA-RISPOLI Mem. Com. geol. Ital. 8 pp. 23-25 pls. vii-ix.

Echinocardium, MORTENSEN 136 pp. 143, 192.

Echinocidarid, GJAJA 80.

Echinocyamus polyporus sp. n. New Zealand, MORTENSEN Vidensk. Medd. nat. For. Kjöbenhavn 73 pp. 143, 176 pl. vi figs. 28-31.—*E.* with *E. sollers* sp. n. Indian Oc., KOEHLER Ech. of Ind. Empire 9 pp. 132-138 pls. xii figs. 6-14, 18, 19; xv fig. 6.

†“*Echinocyamus*” *intermedius* sp. n. Eocene Peru, HAWKINS in BOSWORTH & OTHERS Geol. of Peru 1922 p. 120.

†*Echinoconus*, HOPPE 92 p. 115.

†*Echinocorys* (*Ananchites*) *poznan-skii* sp. n. Upper Cretaceous Bolivia, BERRY J. Geol. Chicago 30 pp. 227-231.—*E.*, LAMBERT 114 pp. 25-26.

Echinodiscus, KOEHLER 110 pp. 123-131.

Echinoneus, CLARK 33 p. 119.

†*Echinoides*, VAUGHAN 177.

Echinolampas, KOEHLER 110 pp. 140-146.

†*Echinolampas*, CHECCHIA-RISPOLI 30 pp. 73-75.—*E.*, GERTH 75 pp. 505-506.—*E.*, JACKSON 96 p. 57.—*E.*, LAMBERT 113.—*E.*, OPPENHEIM 147.—*E.*, VOLTTESTI 180 pp. 126, 143.—*E.*, STEFANINI 170a pp. 137-138.

Echinometra, CLARK 33 p. 118.

†*Echinometra*, JACKSON 96 p. 25.

Echinoneus, KOEHLER 110 p. 147.

†*Echinoneus*, JACKSON 96 p. 54.

†*Echinopodina*, JACKSON 96 p. 23.

Echinopluteus transversus form. n. West Indies, MORTENSEN Studies of devel. larval forms Ech. Copenhagen 1921 p. 78 pl. xiii figs. 1-4.

Echinus esculentus, ELMHIRST 59.—*E. e.*, TREWAVAS 173.—*E. miliaris*, DEVANESAN 51.—*E. m.*, GRAY 85.—*E. m.*, OHSHIMA 145 & 146.—*E. m.*, SHEARER 165.—*E. microtuberculatus*, SHEARER 164.—*E.*, HUXLEY 95.

†*Enallaster* with *E. wenoensis* sp. n. Cretaceous U.S.A., ADKINS Univ. Texas Bul. 1856 pp. 111-114 pl. v fig. iii.—*E.*, BERRY & STINGEWALD 12 p. 60.

†*Encope* with *E. latus* Miocene W. Indies, JACKSON Carnegie Inst. Pub. 306 p. 50 pl. vii fig. 7.

†*Epiaster* with *E. crassus* [? sp. n.] Upper Cretaceous Spain, LAMBERT Ann. soc. linn., Lyon 66 p. 31 pl. iii figs. 1, 2.—*E.* with *E. wenoensis*, *subobesus* spp. n. Cretaceous U.S.A., ADKINS Univ. Texas Bul. 1856 pp. 105-110 pls. vi fig. 6; xi fig. 3.—*E.*, BRYDNE 20.

Euclidaris, CLARK 33 p. 104.

†*Eupatagus* with *E. depressus*, *elegans vaughani* spp. n. Oligocene W. Indies, JACKSON Carnegie Inst. Pub. 306 pp. 88-97 pls. xvi figs. 7, 8; xvii figs. 1, 2; xviii figs. 1, 2.—*E.* with *E. martini* sp. n. Java, GERTH Samml. geol. Reichsmus. 1 pp. 511-512 pl. lii figs. 1, 1a.

Evechinus, MORTENSEN 136 pp. 143, 172.

Fibularia, KOEHLER 110 pp. 138-140.

Genocidaris, CLARK 33 p. 114.—*G.*, MORTENSEN 136 pp. 142, 145.

†*Gibbaster* with *G. mengaudi* [? sp. n.] Upper Cretaceous Spain, LAMBERT Ann. soc. linn., Lyon 67 pp. 14-15 pl. ii figs. 13, 15.

†*Gitolampas*, CHECCHIA-RISPOLI 31 p. 17.

†*Gitolampopsis* sec. n. with *G. lamberti*, *zuffardii* [? spp. n.] Cretaceous Tripoli, CHECCHIA-RISPOLI Mem. Com. geol. Ital. 8 pp. 18-21 pls. vii-ix.

†*Globator*, CHECCHIA-RISPOLI 31 p. 15.

†*Glyphocyphus*, LAMBERT 114 p. 6.

†*Goniopygus*, ADKINS 1 p. 102.—*G.*, CHECCHIA-RISPOLI 31 p. 12.

†*Grasia*, FAURE-MARGUERIT 62 p. 31.

Heliocidaris, MORTENSEN 136 p. 174.

†*Hemiaster* with *H. berkeyi* sp. n. Cretaceous W. Indies, JACKSON Carnegie Inst. Pub. 306 p. 73 pl. xii fig. 10.—*H. cottreawi*, *micranthus* [? spp. n.] Upper Cretaceous Spain, LAMBERT Ann. soc. linn., Lyon 68 p. 15 pls. ii figs. 16, 17; iii figs. 12, 13.—*H.* with *H. mancus* [? sp. n.] Upper Cretaceous Spain, LAMBERT Ann. soc. linn., Lyon 67 pp. 15-16 pl. iii fig. 14.—*H.* with *H. paronai* [? sp. n.] Cretaceous Tripoli, CHECCHIA-RISPOLI Mem. Com. geol. Ital. 8 pp. 27-30 pls. vii-ix.—*H.* with *H. riivistae* sp. n. Cretaceous U.S.A., ADKINS Univ. Texas Bul. 1856 pp. 114-117 pls. vi fig. 4; viii figs. 2-3, 5.—*H. stahli* sp. n. Cretaceous Persia, FISCHER Beitr. Pal. Geol. Ost. Ung. 27 p. 251 pl. xxi fig. 11.—*H.* with *H. (Leucaster) tuberculatus* sp. n. Java, GERTH Samml. geol. Reichsmus. 1 p. 508 pl. lii figs. 7, 7a.—*H.*, CHECCHIA-RISPOLI 28 p. 282 and 29 p. 91.—*H.*, LAMBERT 116 p. 23.—*H.*, MITCHELL 133 p. 285.—*H.*, OPPENHEIM 147.

†*Hemipneustes zuffardii* [? sp. n.] Cretaceous Tripoli, CHECCHIA-RISPOLI Mem. Com. geol. Ital. 8 p. 30 pls. vii-ix.—*H.*, LAMBERT 14 p. 25.

†*Heteractechinus mengaudi* [? sp. n.] Upper Cretaceous Spain, LAMBERT Ann. soc. linn., Lyon 66 p. 9 pl. i figs. 14, 17.

†*Heteraster*, GILLET 77 p. 8.—*H.*
LAMBERT 116 p. 16.

†*Heterodiadema*, CHECCHIA-RISPOLI
31 p. 6.

†*Hipponoë*, GERTH 75 p. 502.

†*Holaster similis* [? sp. n.] Cretaceous
Spain, LAMBERT Trab. Mus. Nac. Ci.
Nat. 28 p. 11 pl. ii fig. 7.—*H.*, ADKINS
1 p. 104.—*H.*, FISCHER 64.

†*Holactypus cortesei* [? sp. n.] Cre-
taceous Sinai, CHECCHIA-RISPOLI Bol.
Com. geol. Roma 47 p. 280 pl. i.—
H., ADKINS 1 p. 103.—*H.*, BERRY &
STINGEWALD 12 p. 60.—*H.*, CHECCHIA-
RISPOLI 29 p. 87 & 31 p. 14.—*H.*,
LAMBERT 114 pp. 11–12 & 116 p. 11.

Holopneustes, MORTENSEN 136 pp.
143, 175.

†*Kleinia*, LAMBERT 113.

Laganum with *L. joubini*, *retinens*,
L. (?) rullandi, *L. versatile* spp. n. Indian
Ocean, KOEHLER Ech. of Ind. Empire
9 pp. 83–110 pls. viii fig. 9; ix figs. 3,
6, 9, 10, 12, 13; x figs. 5, 6, 8, 9, 13;
xii figs. 1–4; xiii figs. 2, 5, 8; xiv
fig. 7; xv figs. 2, 3, 7.—*L.*, MOR-
TENSEN 136 pp. 143, 179.

†*Laganum*, GERTH 75 p. 503.—*L.*,
JACKSON 96 p. 46.

†*Lampadaster*, FOSSA-MANCINI 69.

†*Lanieria*, JACKSON 96 p. 28.

†*Leiocardis*, ADKINS 1 p. 101.

†*Linthia paronai* sp. n. Upper Cre-
taceous Tripoli, CHECCHIA-RISPOLI Bol.
Com. geol. Roma 45 p. 112 figs. 4–6.—
L., CHECCHIA-RISPOLI 29 p. 91 & 31
p. 27.—*L.*, LAMBERT 12 p. 22.

†*Lovenia gregoryi* sp. n. Miocene
Anguilla, LAMBERT Ann. Mag. Nat.
Hist. 9 p. 589 pl. ix figs. 5, 6.—*L.*,
GERTH 75 p. 516.

†*Lychnidius*, LAMBERT 114 p. 17.

Lytechinus with *L. panamensis* sp. n.
Panama, MORTENSEN Studies of devel.
larval forms Ech. Copenhagen 1921 p. 41
pl. vii fig. 4.—*L.*, CLARK 33 p. 110.

†*Macropneustes*, JACKSON 96 p. 84.

†*Maretia*, GERTH 75 p. 512.

†*Mariania*, STEFANINI 170a pp. 140–
143.

Mellita, CLARK 33 p. 119.

†*Mellita*, JACKSON 96 p. 52.

†*Metalia batheri* sp. n. Miocene
Anguilla, LAMBERT Ann. Mag. Nat.
Hist. 9 p. 590 pl. ix figs. 1–3.

†*Micraster* with *M. sphaerula*, *pro-
clivis*, *coribericum*, *douvillei*, *santan-
derensis*, *cantaber* [? spp. n.] Upper Cre-
taceous Spain, LAMBERT Ann. soc.
linn. Lyon 67 pp. 1–13 pls. ii figs. 13, 15;
iii figs. 3, 5, 8–11.—*M.* with *M. sphae-
rula*, *proclivis*, *douvillei* [? spp. n.] Cre-
taceous Spain, LAMBERT Trab. Mus.
Nac. Ci. Nat. 28 pp. 17–23 pls. i fig. 3;
ii figs. 2, 3, 5.—*M.*, BRYDONE 20.—
M., RAVN 155.

Notechinus novae-zealandiae sp. n.
New Zealand, MORTENSEN Videns.
Medd. nat. For. Kjöbenhavn 73 pp. 143,
153 pls. vi figs. 7–10; viii figs. 4–5,
7–11.

†*Nucleolites lacunosus*, HAWKINS 89.

†*Offaster*, LAMBERT 114 p. 25.

Ogmocidaris gen. n. *O. benhami* sp. n.
New Zealand, MORTENSEN Videns.
Medd. nat. For. Kjöbenhavn 73 pp. 142,
148 pls. vi figs. 3–6; vii figs. 1–2.

†*Opissaster*, LAMBERT 112 p. 22.

†*Orthopsis haugi* [? sp. n.] Cretaceous
Spain, LAMBERT Trab. Mus. Nac. Ci.
Nat. 28 p. 9 pl. i fig. 5.

Paracentrotus lividus, BALDWIN 4.—
P. l., VLÈS 179.—*P.*, BRACHET 18.

†*Parapygus*, JACKSON 96 p. 56.

†*Paraster*, JACKSON 96 p. 74.

†*Pedina*, FAURE-MARGUERIT 62 p. 32.

†*Pedinopsis*, ADKINS 1 p. 102.

†*Pellastes*, ADKINS 1 p. 102.—*P.*,
FAURE-MARGUERIT 62 p. 32.—*P.*,
LAMBERT 114 p. 6.

†*Pericosmus*, STEFANINI 170a p. 145.
—*Pericosmos*, GERTH, 75 p. 507.

†*Periaster*, JACKSON, 96 p. 80.

Peronella hinemoe sp. n. New Zea-
land, MORTENSEN Videns. Medd. nat.
For. Kjöbenhavn 73 pp. 143, 177 pls.
vi. figs. 22, 23; vii figs. 31–35.—*P.* with
P. macroproctes, *merguiensis* sp. n.
Indian Oc., KOEHLER Ech. of Ind.
Empire 9 pp. 110–122 pls. ix. figs. 11,
14; x figs. 1, 10–12; xiii figs. 4, 13;
xv figs. 8, 11.

†*Peronella mirabilis* sp. n. Eocene W. Indies, JACKSON Carnegie Inst. Pub. 306 p. 47 pl. ix fig. 3.

†*Phyllobrissus*, LAMBERT 116 p. 11.

†*Phymosoma* with *P. pseudotiara* [? sp. n.] Upper Cretaceous Spain, LAMBERT Ann. soc. linn. Lyon 66 p. 7 pl. i figs. 1, 4.—P., JACKSON 96 p. 25.

†*Plagiobrissus*, JACKSON 96 p. 83.

†*Plagiocidaritis*, FAURE-MARGUERIT 62 p. 28.

†*Pleurechinus*, GERTH, 75 p. 501.

†*Platoxaster* with *P. paquieri* [? sp. n.] Lower Cretaceous Spain, LAMBERT Ann. soc. linn. Lyon 66 pp. 27–30 pl. iii figs. 6, 7.

Plococidaritis gen. n. MORTENSEN Echin. Deutsch. Sudpolar Exped. 1909 p. 51. Genotype: *Cidaritis bispinosa* Lamarek. [Accidentally omitted from previous records.]

†*Polydiadema* with *P. cantabrum* [? sp. n.] Lower Cretaceous Spain, LAMBERT Ann. soc. linn., Lyon 66 p. 5.—P., LAMBERT 116 p. 9.

Poriocidaritis gen. n. MORTENSEN, Echin. Deutsch. Sudpolar Exped. 1909 p. 53. Genotype: *Porocidaritis purpurata* Wyv. Thomson. [Accidentally omitted from previous records.]

†*Porosoma*, LAMBERT 112 p. 21.

†*Prenaster*, JACKSON 96 p. 72.

†*Psammechinus mengaudi* [? sp. n.] Oligocene Spain, LAMBERT Trab. Mus. Nac. Ci. Nat. 28 p. 24 pl. i fig. 11.

†*Pseudasterostoma*, JACKSON 96 p. 68.

Pseudechinus with *P. variegatus* sp. n. New Zealand, MORTENSEN Videns. Medd. nat. For. Kjöbenhavn 73 pp. 143, 160 pls. vi figs. 11–15, 17–21; vii figs. 12–24.

Pseudoobolotia occidentalis sp. n. West Indies, CLARK Bul. Lab. Nat. Hist. Iowa 9 No. 5 p. 115 pl. ii.

†*Pseudonucleus* [? gen. n.] with *P. malladai* [sp. n.] Upper Cretaceous Spain, LAMBERT Ann. soc. linn. Lyon 66 pp. 17–18 pl. ii figs. 8, 12.

†*Pseudopygaster* gen. n. Genotype *P. eos*. Lias Persia, HAWKINS Geol. Mag. 59 pp. 216–221.

†*Pseudopygasteridae* fam. n., HAWKINS Geol. Mag. 59 p. 215.

(N-15697 m) Q

†*Pyrina*, LAMBERT 114 p. 15.—P., HOPPE 92 p. 77.

†*Rachiosoma*, CHECCHIA-RISPOLI 31 p. 11.

†*Rhabdocidaritis*, CHECCHIA-RISPOLI 30 p. 72 & 32.—R., FAURE-MARGUERIT 62 p. 30.

Rhaphidoclypeus, KOEHLER 110 p. 66.

†*Rhynchopygus donetzensis* sp. n. Upper Cretaceous Russia, FAAS Ann. Soc. Paleont. Russie 2 pp. 65–84 pl. iii.

†*Salenia*, ADKINS 1 p. 103.—S., CHECCHIA-RISPOLI 31 p. 9.—S., JACKSON 96 p. 24.—S., LAMBERT 114 p. 7.

†*Salmacis*, GERTH 75 p. 502.

†*Scagliaster*, FOSSA-MANCINI 69.

Schizaster, SCHEURING 161 p. 146.

†*Schizaster cantaber* [? sp. n.] Nummulitic Spain, LAMBERT Ann. Soc. linn. Lyon 68 p. 22 pl. iii fig. 15.—S., with *S. progoënsis* sp. n. Java, GERTH Samml. geol. Reichsmus 1 pp. 509–510 pl. lii figs. 2, 2A, 2B.—S., JACKSON 96 p. 81.—S., KOBER 107 p. 401.—S., LAMBERT 113.—S., NÖRREGARD 142.—S., STEFANINI 170a pp. 146–148.

†*Schizobrissus*, LAMBERT 113.

†*Scutella* with *S. forumjuliensis* sp. n. Miocene Italy, STEFANINI Pal. Ital. Pisa 25 pp. 135–136 pl. xiv [viii] figs. 1, 2.

†*Sismondia javana* sp. n. Java, GERTH Samml. geol. Reichsmus. 1 p. 502 pl. lxii figs. 4, 4A.—S., JACKSON 96 p. 30.

†*Spatangomorpha paucituberculata* sp. n. Java, GERTH Samml. geol. Reichsmus 1 p. 513 pl. lii figs. 6, 6A.

†*Spatangus* with *S. seccoii* sp. n. Miocene Italy, STEFANINI Pal. Ital. Pisa 25 p. 138 pls. xiv [viii] fig. 6; xv [ix] fig. 7.

Sphaerechinus granularis, LANDAUER 119.

†*Stereocidaritis sancti-martini* sp. n. Cretaceous France, VALETTE Bul. soc. sci. Yonne 74 p. 30.—S., LAMBERT 114 p. 4.

Strongylocentrotus droebachensis, STEPHENSEN 171 p. 69.—S. *lividus*, GRAY 86.—S. *l.*, LANDAUER 119.—S., SAMPSON 160.—S., SCHEURING 161 p. 145.

†*Studeria*, GERTH 75 p. 506.

Stylocidaris gen. n. MORTENSEN, *Echin. Deutsch. Sudpolar Exped.* 1909 p. 52. Genotype: *Cidaris affinis* Phil. [Accidentally omitted from previous records.]—S., CLARK 33 p. 105.

†*Temnechinus*, GERTH 75 p. 501.

†*Temnopleurus*, GERTH 75 p. 501.

Tretocidaris, CLARK 33 p. 106.

Tripneustes, CLARK 33 p. 113.

†*Tylocidaris*, LAMBERT 114 p. 4.

†*Typocidaris* with *T. mengaudi* [? sp. n.] Upper Cretaceous Spain, LAMBERT Ann. soc. linn. Lyon 66 pp. 2-3 pl. i figs. 5, 9.—T., FAURE-MARGUERIT 62 p. 29.

†*Zuffardia*, CHECCHIA-RISPOLI 29 p. 88 & 31 p. 21.

ASTEROIDEA.

Anasterias, FISHER 66 p. 595.

Asterias rubens, PELSENEER 152.—*A. glacialis*, DALCQ 46.—A., BOWEN 17. A., SCHEURING 161 p. 146.

Asterina orthodon sp. n. Hong Kong, FISHER Ann. Mag. Nat. Hist. 10 pp. 415-418 pl. x.—*A. gibbosa*, ZIRPOLO 186.

Calliaster elegans, regenerator spp. n. Malaysia, DÖDERLEIN Bijdr. Dierk. Amsterdam 1922 pp. 47-51.

Coelasterias, FISHER 66 p. 598.

†*Oomptonia wintoni* sp. n. Cretaceous U.S.A., ADKINS Univ. Texas Bul. 1856 p. 97 pl. vii figs. 4-5.

Cribrella, SCHEURING 161 p. 147.

Ctenodiscus, NORDGÅRD 141 p. 12.—C., SCHEURING 161 p. 149.

†*Loactis*, SPENCER 166 p. 205.

Evasterias, KILBORN & MACLEOD 102 p. 323.

Hippasteria, SCHEURING 161 p. 148.

Hymenaster, SCHEURING 161 p. 148.

Koehleraster gen. n. type *Anasterias octoradiata*, Koehler, FISHER Ann. Mag. Nat. Hist. 10 p. 596.

Leptotyphaster, SCHEURING 161 p. 149.

Luidia, KILBORN & MACLEOD 102 p. 323.

Lysastrosoma gen. n. with *L. anthosticta* sp. n. Japan, FISHER Ann. Mag. Nat. Hist. 10 p. 590.

†*Metopaster*, ADKINS 1 p. 97.

†*Palasterina*, SPENCER 166 p. 219.

Parastichaster, FISHER 66 p. 596.

Patiria miniata, NEWMAN 140.

Pedasterias, FISHER 66 p. 594.

†*Pentaceros americanus* sp. n. Cretaceous U.S.A., ADKINS Univ. Texas Bul. 1856 p. 99 pl. vii figs. 1-3.

†*Pentagonaster*, ADKINS 1 p. 95.

Pisaster, KILBORN & MACLEOD 102 p. 323.

Pontaster, SCHEURING 161 p. 149.

Poraniomorpha, SCHEURING 161 p. 148.

†*Prostaster constellatus*, BARROIS, PRUVOST & DUBOIS 5.

Pteraster, SCHEURING 161 p. 147.

Pycnopodia helianthoides, KJERSCHOW-AGERSBORG 105.—P., KILBORN & MACLEOD 102 p. 323.

†*Schuchertia* with *S. wenlocki* sp. n. Wenlockian Scotland, SPENCER Pal. Soc. London 5 pp. 208-218 pls. xiv figs. 5-6; xv figs. 2-4.

Solaster, SCHEURING 161 p. 147.

Stichorella, FISHER 66 p. 597.

OPHIUROIDEA.

Amphiactis, KOEHLER 109 p. 204.

Amphilepis with *A. remittens* sp. n. Malaysia, KOEHLER Bul. U. S. Nat. Mus. 5 No. 100 pp. 202-203 pl. lxi figs. 7, 8.—A., BROCH 19 p. 63.

Amphitimna multispina sp. n. Malaysia, KOEHLER Bul. U. S. Nat. Mus. 5 No. 100 pp. 183-186 pls. lxi figs. 4-9; xcvi fig. 7.

Amphiodia with *A. debita* sp. n. Malaysia, KOEHLER Bul. U. S. Nat. Mus. 5 No. 100 pp. 167-169 pl. lxi figs. 3, 4.—

A. destinata sp. n. Southern Ocean, KOEHLER Austr. Ant. Exp. 1911-14 Sci. Repts. Zool. 8 pp. 32-34 pl. lxxix figs. 4-7.—A., CAMPBELL 22.

Amphiophiura with *A. canaliculata*, *fastigiata*, *spatulifera* spp. n. Malaysia, KOEHLER Bul. U. S. Nat. Mus. 5 No. 100 pp. 357-369 pl. lxxxii figs. 1-8, 10-13.—*A. relegata* sp. n. Southern Ocean, KOEHLER Austr. Ant. Exp. 1911-14 Sci. Repts. Zool. 8 pp. 57-59 pl. lxxxviii figs. 1-7.

Amphiopholis with *A. loripes* sp. n. Malaysia, KOEHLER Bul. U. S. Nat. Mus. 5 No. 100 p. 163-166 pl. lxxviii figs. 4, 5.—A., CLARK 35.

Amphioplus with *A. legatus*, *conductus*, *lucidus*, *luctator* spp. n. Malaysia, KOEHLER Bul. U. S. Nat. Mus. 5 No. 100 pp. 169-183 pls. lxxvii figs. 1-6; lxxviii figs. 1-3, 6-10; xevi figs. 9-10.

Amphiura with *A. commutata*, *dejecta*, *demissa* spp. n. Malaysia, KOEHLER Bul. U. S. Nat. Mus. 5 No. 100 pp. 151-162 pls. lxxvi figs. 1-5; lxxix figs. 1, 2; xevi fig. 6.—*A.* with *A. deficiens* sp. n. Southern Ocean, KOEHLER Austr. Ant. Exp. 1911-14 Sci. Repts. Zool. 8 pp. 27-31 pls. lxxix figs. 8-12; lxxx figs. 1-8; lxxxi figs. 10-12.—A., BROCH 19.—A., CLARK 35.—*A. squamata*, MERCIER 131.—A., SCHEURING 161 p. 151.

Asteronyx, KOEHLER 108 p. 10.—A., KOEHLER 109 p. 34.

Astrodia bispinosa sp. n. Pacific, KOEHLER Austr. Ant. Exp. 1911-14 Sci. Repts., Zool. 8 pp. 12-15 pl. lxxvi.

Astroceras, KOEHLER 109 p. 33.

Astrocharis, KOEHLER 109 p. 32.

Astrophytum, CLARK 35.

Astrothamnus deficiens sp. n. Malaysia, KOEHLER Bul. U. S. Nat. Mus. 5 No. 100 p. 35 pl. i figs. 1-10.

Astroloma, KOEHLER 108 p. 9.

Bathypectinura, KOEHLER 109 p. 342.

Cryptopella tecta sp. n. Malaysia, KOEHLER Bul. U. S. Nat. Mus. 5 No. 100 p. 350 pl. lxxviii figs. 1, 2.

Gorgonocephalus, CAMPBELL 22.—G., SCHEURING 161 p. 151.

Homalophiura, KOEHLER 108 pp. 53-57.—H., KOEHLER 109 pp. 386-388.

Neoplax crassipes sp. n. Malaysia, KOEHLER Bul. U. S. Nat. Mus. 5 No. 100 p. 22 pl. ii figs. 1-3.

Ophiacantha with *O. sollicita* sp. n. Maria Isd., KOEHLER Austr. Ant. Exp. 1911-14 Sci. Repts., Zool. 8 pp. 12 15 pl. lxxix figs. 1-3.

Ophiactis amator sp. n. Southern Ocean, KOEHLER Austr. Ant. Exp. 1911-14 Sci. Repts. Zool. 8 pp. 34-36 pl. lxxxi figs. 1-6.—*O.* with *O. definita* sp. n. Malaysia, KOEHLER Bul. U. S. Nat. Mus. 5 No. 100 pp. 186-195 pl. lxxv figs. 1, 2, 7.—*O.*, BROCH 19 p. 65.—*O.*, CLARK 35.

Ophialcaea, KOEHLER 109 p. 85.

Ophiarachna quinquespinosa sp. n. Malaysia, KOEHLER Bul. U. S. Nat. Mus. 5 No. 100 p. 331 pl. vii figs. 1-3.

Ophiarachnella, KOEHLER 109 pp. 339-342.

Ophiarthrum, KOEHLER 109 p. 331.

Ophiernus, KOEHLER 109 p. 440.

Ophientrema, KOEHLER 109 pp. 85-88.

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- Ophiomyces*, KOEHLER 109 p. 41.
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- Ophionereis*, CAMPBELL 22.—O., CLARK 35.—O., KOEHLER 109 p. 310.
- Ophionotus*, KOEHLER, 108 p. 51.
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Ophiopleura, SCHEURING 161 p. 150.

Ophioplinthaca with *O. hastata* sp. n. Malaysia, KOEHLER Bul. U. S. Nat. Mus. 5 No. 100 pp. 131-147 pls. xviii figs. 6-8; xciv fig. 7.

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Ophiostigma, CLARK 35.

Ophiothamnus with *O. excavatus* sp. n. Malaysia, KOEHLER Bul. U. S. Nat. Mus. 5 No. 100 pp. 100-107 pl. xxii figs. 5-8.

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Ophiotrix with *O. bellax*, *cumulata*, *deceptor*, *pavida*, *prostrata*, *signata* spp. n. Malaysia, KOEHLER Bul. U. S. Nat. Mus. 5 No. 100 pp. 205-283 pls. xxxvi figs. 1, 2; xxxix figs. 1, 2, 6, 7; xlvii figs. 1, 3; l figs. 2-8; li figs. 1-5; lii figs. 1, 2; lviii figs. 1, 2; xcvi figs. 4, 6; xcvi fig. 3.—O., BROCH 19 p. 67.—O., CAMPBELL 22.—O., CLARK 35.—O., SCHEURING 161 p. 151.

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†*Antedon*, VALETTE 174.

†*Balanocrinus* with *B. mexicanus* sp. n. Upper Cretaceous Mexico, SPRINGER Proc. U. S. Nat. Mus. Washington 61 p. 2 pl. i figs. 1-11.—*B.*, VALETTE 174.

†*Camptocrinus*, EHRENBERG 56 p. 281.

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Clarkometra gen. n. (*Perometrinae*), *elegans* sp. n. Japan, GISLÉN Upsala Vet.-Soc. Acta 5 No. 6 pp. 142-143 figs.

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Comaster delicata var. *grandis* var. n. Japan, GISLÉN Upsala Vet.-Soc. Acta 5 No. 6 p. 32 figs.

Comatella brachycirra sp. n. Japan, GISLÉN Upsala Vet.-Soc. Acta 5 No. 6 p. 13 figs.

Commissia peregrina var. *magnifica*, *ignota* var. *minuta* varr. n. Japan, GISLÉN Upsala Vet.-Soc. Acta 5 No. 6 pp. 21, 25 figs.

†*Craspedocrinus schmidtii* gen. & sp. n. Devon, Germany, DAHMER Jahrb. geol. Landesanst. 40 T.2 p. 292 pl. xvi figs. 4-8.

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†*Crinoidea Flexibilia*, List of British species, BATHER 8.—*C.*, YAKOWLEV 184.

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†*Cyathocrinus*, ROBERT 159.

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†*Dendrocrinus*, COX 40.—*D.*, EHRENBERG 56 p. 275.

†*Diamenocrinus*, EHRENBERG 56 p. 276.

Diodontometra gen. n. (near *Charitometra*) *bocki* sp. n. Japan, GISLÉN Upsala Vet.-Soc. Acta 5 No. 6 pp. 121, 123 figs.

†*Encrinus*, ARTHABER, 3.

†*Entrochus*, ARTHABER 3; DIENER 53 p. 97.

Eudiocrinus gracilis var. *pulchellus* var. n. *E. lovèni* sp. n. Japan, GISLÉN Upsala Vet.-Soc. Acta 5 No. 6 pp. 69, 72 figs.

†*Eupachycrinus*, MORNINGSTAR 134 p. 154.

†*Glyptocrinus*, EHRENBERG 56 p. 274.

†*Herpetocrinus*, EHRENBERG 56 p. 280 58.

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†*Homocrinus*, EHRENBERG 56 p. 279.

Isocrinus asteria, CLARK 36 p. 6.

†*Isocrinus* with *I. parvus* sp. n. Cretaceous Australia, HOWCHIN Trans. R. Soc. S. Aust. 45 pp. 1-4.

†*Lophocrinus*, WEIGELT 181.

†*Mariocrinus*, EHRENBERG 56 p. 273.

†*Marsupites*, DIBLEY & FAGG 52.

†*Melocrinus pulcher* and var. *annulifera* var. n. Devonian, SPRIESTERS-BACH Jahrb. geol. Landesanst. 38 1 pp. 440-447 pls. xxiv figs. 1-7; xxv figs. 1-8.

Metacrinus nobilis var. *tenuis* var. n. *interruptus* f. *ornatus* f. n. Japan, GISLÉN Upsala Vet.-Soc. Acta 5 No. 6 p. 147 figs.

†*Millerocrinus*, FAURE-MARGUERIT 62 p. 27.

†*Pentacrinus* c.f. *subangularis* Miller, Lias descr. by SPRINGER in LEFFINGWELL U. S. Geol. Surv., Prof. papr. 109 p. 119.—*P.*, FABER 61.

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†*Proteriocrinus*. [err. pro *Poterioc.*] DIENER 53 pp. 46, 97

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†*Rhipidocrinus*, MANSUY 129.

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VI. VERMES

ARRANGED BY

H. M. WOODCOCK.

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VII. BRACHIOPODA AND BRYOZOA

BY

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VIII. MOLLUSCA

ARRANGED BY

II. B. PRESTON.

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N.B.—*The numerals in Clarendon where not indicating a Volume refer to Titles.*

Note.—*The following arrangement is as far as possible after Pelseneer.*

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†*Acanthochitona*, BERRY 55 p. 456.

†*Callistochiton* with *C. decoratus ferminicus* subsp. n. Pleistocene California, BERRY Proc. Cal. Acad. Sci. 11 pp. 481-492.

Chaetopleura apiculata, GRAVE 257.—C., CROZIER 157.

†*Chaetopleura*, BERRY 55 p. 460.

Chiton, CROZIER 156.—C. SNYDER & CROZIER 560.

†*Cryptochiton*, BERRY 55 p. 457.—C., CROZIER 156.

†*Cyanoplax*, BERRY 55 p. 435.

†*Ischnochiton* with *I. (Lepidozona) sanctaemonicae* sp. n. Pleistocene California, BERRY Proc. Cal. Acad. Sci. 11 pp. 461-480.—I., CROZIER 156.

†*Katharina*, BERRY 55 p. 455.

Kopionella, ASHBY 23.

†*Lepidochitona*, BERRY 55 p. 438.

†*Leptochiton clarki* sp. n. Pleistocene California, BERRY Proc. Cal. Acad. Sci. 11 p. 427.

Loricella ASHBY 26 & 27.

†*Loricella sculpta* sp. n. Tertiary Tasmania, ASHBY Papers and Proc. R. Soc. Tasmania 1921 p. 38.

Mopalia, CROZIER 156.

†*Mopalia*, BERRY 55 p. 441.

†*Nuttallina*, BERRY 55 p. 439.

†*Oligochiton* gen. n. *Callochitonidae* with *O. lioplax* sp. n. Oligocene Vancouver, BERRY Proc. Cal. Acad. Sci. 11 p. 431.

†*Placiphorella*, BERRY 55 p. 453.

Rhyssoplax surrecta sp. n. [? S. Australia], HULL Austral. zool. Sydney 2 pp. 84-85.

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†*Tonicella*, BERRY 55 p. 433.

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†*Palaeacmaea ancyloides* sp. n. Palaeozoic Indo-China, MANSUY Mém. serv. géol. Indochine 5 p. 20.

Patella vulgata, BYNE 99.—*P.*, LUDFORD 374 & 375.

†*Patella ? amurita* sp. n. Cretaceous N. Zealand, WILCKENS Pal. Bul. Geol. Surv. N. Z. 9 p. 5.—*P.*, BEHRENDSEN 49 p. 193.

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†*Bellerophon (Bucanella) tumidus*, Sandb. var. *complanata*, B. (B.) *crassica* sp. & var. n. Devon, Germany, FUCHS Abh. geol. Landesanst. 79 pp. 61-62.—*B.*, KIRCHNER 341 p. 194.—*B.*, REED 506 p. 308.

Cemoria, BARTSCH 46.

†*Emarginula perrandoi* sp. n. Pliocene Italy, ISSEL Atti soc. lig. Genova 1 p.

125.—*E. vadososinuata* sp. n. Pleistocene Japan, YOKOYAMA J. Coll. Sci. Tokyo 44 p. 117.—*E.*, BEHRENDSEN 49 p. 193.

†*Euomphalus*, GARWOOD 230.

†*Fissurellidae*, PILSBRY 473 p. 399.

†*Macrochisma sinensis*, A. Ads. var. n. *brevis* Pleistocene Japan, YOKOYAMA J. Coll. Sci. Tokyo 44 p. 115.

†*Murchisonia acutecarinata* sp. n. Devon, Germany, SPRIESTERSBACH Abh. Geol. Landesanst. 80 p. 4.—*M. infra-lineata* sp. n. Devon, Germany, FUCHS Abh. geol. Landesanst. 79 p. 63.—*M. Kahlebergensis* sp. n. Devon, Germany, DAHMER Jahrb. geol. Landesanst. 40 T. 2 p. 226.—*M. westfalica, evoluta* spp. n., Devon, Germany, SPRIESTERSBACH Jahrb. geol. Landesanst. 38 T. 1 pp. 494-495.—*M. yunnanensis* sp. n. Carbon Indo-China, MANSUY Mém. serv. géol. Indochine 6 p. 32.—*M.* with *M. pagodeformis* sp. n. Devon, Germany, KIRCHNER Verh. nat. hist. Ver. Bonn 71 pp. 204-211.

†*Pleurotomaria crussoliensis, riouletensis* spp. n. Lias France, RICHE & ROMAN Trav. Lab. géol. Lyon 1 pp. 112-114.—*P. decussata* var. *kahlebergensis* *P. findespinosa* sp. & var. n. Devon, Germany, DAHMER Jahrb. geol. Landesanst. 37 T. 1 pp. 460-461.—*P. hiedereriana* sp. n. Lias Germany, SCHNITTMANN Zs. D. geol. Ges. Berlin 74 p. 22.—*P.*, with *P. (Euryzone) basalestriata* sp. n. Devon, Germany, KIRCHNER Verh. nat. hist. Ver. Bonn 71 pp. 198-203.—*P. maoriensis, woodsii*, spp. n., Cretaceous, N. Zealand, WILCKENS Pal. Bul. Geol. Surv. N. Z. 9 pp. 2-4.—*P. ornatiformis* sp. n. Carbon U.S.A., MORNINGSTAR Geol. Surv. Ohio 25 p. 253.—*P. tristriata* sp. n. Devon Germany, FUCHS Abh. geol. Landesanst. 79 p. 63.—*P. (Eotomaria) giengelsbergensis* sp. n. Devon Germany, DAHMER Jahrb. geol. Landesanst. 40 T. 2 p. 222.—*P. (Mourlonia) (?) colani* sp. n. Carbon. Indo-China, MANSUY Mém. serv. géol. Indochine 6 p. 21.

TROCHIDÆ, STOMETALLIDÆ, ORBITES-TELLIDÆ, TURBINIDÆ, NERITOPSIDÆ, NERITIDÆ.

†*Amberleya escheri* var. n. *ehenfeldensis* Lias Germany, SCHNITTMANN Zs. D. geol. Ges. Berlin 71 p. 23.—*A.*

graysonensis sp. n. Cretaceous U.S.A. ADKINS Univ. Texas Bul. 1856 p. 137.—*A. (Hamusina) hudlestoni, sub-bertheloti* spp. n., Lias France, RICHE & ROMAN Trav. Lab. géol. Lyon 1 pp. 99–100.

†*Astraliun brevispinum*, Lk. var. n. *basalis* Miocene Costa Rica, OLSSON Bul. Amer. Pal. 39 p. 162.

†*Ataphrus haugi* sp. n. Lias Morocco, COSSMANN & ABRARD Bul. soc. géol. Paris 21 p. 154.

†*Basilissa ? læviscula* sp. n. Pleistocene Japan, YOKOYAMA J. Coll. Sci. Tokyo 44 p. 113.

†*Calliostoma limonensis, mancinella, castilla*, spp. n., Miocene Costa Rica, OLSSON Bul. Amer. Pal. 39 pp. 164–165.—*C. promense* sp. n. Tertiary India, VREDENBURG Rec. geol. Surv. Ind. 51 p. 316.—*C. singuense* sp. n. Tertiary Burma, VREDENBURG Rec. geol. Surv. Ind. 51 p. 293.

†*Chlorostoma costaricensis* sp. n. Miocene Costa Rica, OLSSON Bul. Amer. Pal. 39 p. 163.

†*Cyclostrema stillicidium* sp. n. Pleistocene Japan, YOKOYAMA J. Coll. Sci. Tokyo 44 p. 114.

†*Cyclostrematidae*, PILSBRY 473 p. 397.

†*Eumargarita (Solariella) augsanana* sp. n. Tertiary, MARTIN Samml. geol. Reichsmus. 1 p. 477.—*E. (Solariella) wassyensis* sp. n. Lower Cretaceous France, GILLET Bul. soc. géol. Paris 21 p. 26.

†*Floydia concentrica* and *F. c. multisinuata* sp. & var. n. Devon, Iowa FENTON Amer. Midl. Nat. 5 pp. 221–223.

Gibbula pennanti, PEILE 463.

†*Gibbula (Colliculus) njalindungensis* sp. n. Tertiary, MARTIN Samml. geol. Reichsmus. 1 p. 466.

†*Leptothyra pygmaea, crassilirata* spp. n., Pleistocene Japan YOKOYAMA J. Coll. Sci. Tokyo 44 p. 108.

†*Liotia augsanana* sp. n. Tertiary, MARTIN Samml. geol. Reichsmus. 1 p. 478.—*L. (Liotia) perplanata* sp. n. Eocene France, COSSMANN Bul. soc. sci. nat. Nantes 5 p. 137.

†*Monodonta*, KIRCHNER 341 p. 235.

†*Naticopsis pulchella* sp. n. Carbon U.S.A., MORNINGSTAR Geol. Surv. Ohio 25 p. 256.—N., KIRCHNER 341 p. 236.

†*Neritidae*, PILSBRY 473 p. 396.

Neritina with *N. simoni, weberi*, spp. n., Sumatra, PRASHAD Rec. Ind. Mus. 22 pp. 497–501.

†*Neritina* [vide etiam *Theodoxis*.] (*Neritodonta*) *bolivari* sp. n. Miocene Spain, GOMEZ Mem. Com. Inv. Pal. Madrid 30 p. 94.

†*Neritopsis*, PETITCLERC 468 p. 27.

†*Phasianella mollis* sp. n. Miocene Costa Rica, OLSSON Bul. Amer. Pal. 39 p. 160.

†*Phasianellidae*, PILSBRY 473 p. 396.

†*Pileolus obliquus* gen. & sp. n. Devon Germany, SPRIESTERSBACH Jahrb. geol. Landesanst. 38 T. 1 pp. 501–503.

†*Protodolium* gen. n. Cretaceous N. Zealand, WILCKENS Pal. Bul. Geol. Surv. N. Z. 9 p. 18.

†*Solariella subcraticulata* var. n. *acuticarina* Eocene France, COSSMANN Bul. soc. sci. nat. Nantes 5 p. 134.

†*Straparollus kirchneri* sp. n. Devon Germany, DAHMER Jahrb. geol. Landesanst. 40 T. 2 p. 229.

Syncera, IREDALE 309.

†*Theodoxis* [vide etiam *Neritina*.] *helvetica* nom. n. for *Theodoxia ferrussaci*, Mayer-Eymaremd. Locard 1893; *T. hassiaca* nom. n. for *Neritina callifera*, Sandb. 1861, WENZ Nachrbl. D. Malak. Ges. 1919 p. 75.

†*Trachynnerita evoluta* sp. n. Trias S. America, JAWORSKI N. Jahrb. Min. Stuttgart Beil. Bd. 47 p. 142.

†*Trochidae*, PILSBRY 473 p. 396.

Trochus, GJAJA 251.—*T. NORDGÅRD* 434 p. 16.—*T.*, TOMLIN 597.

†*Trochus brunkhuberianus, subacutecarinatus*, spp. n., Lias, Germany, SCHNITTMANN Zs. D. geol. Ges. Berlin 74 p. 23.—*T. laticonicus* sp. n. Cretaceous U.S.A., ADKINS Univ. Texas Bul. 1856 p. 138.—*T. spinigera* sp. n. Pleistocene Japan, YOKOYAMA J. Coll. Sci. Tokyo 44 p. 109.—*T. ? antipodum* sp. n. Cretaceous N. Zealand, WILCKENS Pal. Bul. Geol. Surv. N. Z. 9 p. 34.—*T.*, Behrendsen 49 p. 168.

†*Turbinidae*, PILSBRY 473 p. 395.

†*Turbo belli* and var. *aequifilicatum* sp. & var. n. Tertiary Peru, SPIEKER Johns Hopkins Univ. Stud. Geol. 3 pp. 91-92.—*T. bodenbenderi* sp. n. Jura Argentina, BEHRENDSEN Act. Acad. Ci., Cordoba 7 p. 193.—*T.* with *T. multistriatus*, *zonatus*, *aequistriatus*, *torosus*, *soelenichensis*, spp. n., Devon, Germany, KIRCHNER Verh. nat. hist. Ver. Bonn 71 pp. 228-234.—*T. saltus* sp. n. Miocene Costa Rica, OLSSON Bul. Amer. Pal. 39 p. 161.

†*Vitrinella (Solariorbis) amosbrowni* sp. n. Tertiary Santo Domingo, PILSBRY Proc. Acad. Nat. Sci. Philad. 83 p. 398.

HELICINIDÆ, PROSERPINIDÆ.

†*Ampullina gabbi*, *paytensis*, spp. n. Tertiary, Peru, WOODS in BOSWORTH Geol. of Peru 1922 p. 77.

Aphanoconia, BOETTGER 65.

Geophorus (Agglutinans) oxytropis mertoni sp. n. Malay Archipelago, BOETTGER Abh. Senckenb. Naturf. Ges. 35 p. 412.

Helicina oahuensis; *H. laciniosa*, Migh varr. *delta*, *gamma*, *beta*, *alpha*; *H. hawaiiensis knudseni*, *kauaiensis*, *nuuanuensis*, *berniceia*, *lymaniana*, *juddii*, spp. & varr. n., Hawaiian Ids., PILSBRY & COOKE Occ. pprs. Ber. P. Bishop. Mus. Honolulu 3 pp. 219-229.—*H.*, BAKER 42.

Lucidella, BAKER 42.

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PECTINIBRANCHIA.

TAENIOGLOSSA.

PALUDINIDÆ, CYCLOPHORIDÆ, AMPULLARIIDÆ, LITTORINIDÆ, FOSSARIDÆ, PLANAXIDÆ, CYCLOSTOMATIDÆ, VALVATIDÆ, RISSOIDÆ.

Acmella, BOETTGER 65.

Adelomorpha with *A. abscondita* sp. n. Malay Archipelago, BOETTGER Abh. Senckenb. Naturf. Ges. 35 pp. 403-404.

Alaba, DALL 165.

†*Alaba (Gibborissoa) pliocaenica*, *algeriensis*, spp. n., Pliocene, COSSMANN Essais pal. comp. Paris 1921 p. 316.

†*Alvania allixi* sp. n. Eocene France, COSSMANN Bul. soc. sci. nat. Nantes 5 p. 116.—*A. (Alvinia) bonneti*, *littorinoides*, *A. sacyi*, spp. n., Tertiary, COSSMANN Essais pal. comp. Paris 1921 p. 320.

Alycaeus maosmaiensis sp. n. Khasi Hills, GODWIN AUSTEN Rec. Ind. Mus. 24 p. 365.

Ampullaria with *A. americanista*, *pulchella gallardoi*, *consolatrix*, spp. & subsp. n., Argentina, v. IHERING Prim. Réun. Nac. soc. Arg. Ci. Nat. Buenos Aires 1919 pp. 330-339.—*A.* with *A. putula catemacensis* subsp. n. Mexico, BAKER Ann Arbor Mich. occ. pprs. mus. zool. No. 108 pp. 37-42.

Ampullariidae, ROBSON 524.

Aperostoma, BAKER 42.

Aperostomatinae, BAKER 43.

Auritus hoyeri sp. n. Albania, POLIŃSKI Ann. zool. Mus. Polon. Hist. Nat. Warsaw 1 p. 153.

†*Ceratia ? allixi* sp. n. Eocene France, COSSMANN Bul. soc. sci. nat. Nantes 5 p. 112.

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†*Dialopsis sacyi* sp. n. Oligocene, Gironde, COSSMANN Essais pal. comp. Paris 1921 p. 317.

Diplommatina (D.) mertoni sp. n. Malay Archipelago, BOETTGER Abh. Senckenb. Naturf. Ges. 35 p. 401.

†*Erica gaali* nom. n. for *Cyclostoma bisulcatum* Gaal, WENZ Nachrbl. D. Malak. Ges. 1919 p. 72.

†*Gibborissoa polycolpata*, *conica*, spp. n. Tertiary, COSSMANN Essais pal. comp. Paris 1921 p. 322.

†*Haurakia crassicauda* sp. n. Tertiary Tasmania, MAY Papers and Proc. R. Soc. Tasmania 1921 p. 11.

†*Holopea asiatica* sp. n. Devon Indo-China, MANSUY Mém. serv. géol. Indochine 7 p. 21.—*H. distincta* sp. n. Devon Germany, DAHMER Jahrb. geol. Landesanst. 40 T. 2 p. 229.

†*Ischurostoma gallicum* nom. n. for *Hybocystis filholi*, Bourg. emend Filhol 1877, WENZ Nachrbl. D. Malak. Ges. 1919 p. 73.

Lacuna, BARTSCH 46.

†*Lacuna (Ephera) allixi* sp. n. Eocene France, COSSMANN Bul. soc. sci. nat. Nantes 5 p. 107.

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Lanistes, GERMAIN 238.

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†*Litiopa de-la-Molhe* sp. n. Lower Pliocene, Algeria, COSSMANN Essais pal. comp. Paris 1921 p. 315.

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Littorivaga, WINCKWORTH 650.

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Moussonia, BOETTGER 65.

Neritoides, WINCKWORTH 650.

†*Nodulus morgani* sp. n. Miocene, COSSMANN Essais pal. comp. Paris 1921 p. 315.

Paludina [vide etiam *Vivipara*.] *vivipara*, ARTOM 24 & 25.—*P.*, HERFS 238 p. 557.

†*Paryphostoma dumasi* sp. n. Eocene France, COSSMANN Bul. soc. sci. nat. Nantes 5 p. 111.

†*Peringia dollfusi* sp. n. Tertiary, COSSMANN Essais pal. comp. Paris 1921 p. 323.

†*Planaxidae* with *Dalliaella brusinai* var. n. *peyroti* Tertiary, COSSMANN & PEYROT Act. soc. linn. Bordeaux 73 pp. 317-319.

†*Rissoa (Cingula) plebeja*, *R. (Moerchiella) manzakiana*, spp. n., Pleistocene Japan, YOKOYAMA J. Coll. Sci. Tokyo 44 p. 79.

†*Rissoidae*, PILSBRY 473 p. 380.

†*Rissoina agathostoma*, *R. (Zebinella) bureauvi*, spp. n., Eocene, France, COSSMANN Bul. soc. sci. nat. Nantes 5 pp. 113-114.—*R. podolica, guppyi, gaasensis* spp. n., Tertiary, COSSMANN Essais pal. comp. Paris 1921 pp. 317-318.

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†*Tuba* with *T. bearnensis* sp. n. Tertiary, COSSMANN & PEYROT Act. soc. linn. Bordeaux 73 pp. 178-180.

†*Turbella tenuilineata, inflexicosta*, spp. n., COSSMANN Essais pal. comp. Paris 1921 p. 319.

†*Turbonitella* with *T. tuberculata* sp. n. Devon Germany, KIRCHNER Verh. nat. hist. Ver. Bonn 71 pp. 238-239.

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†*Valvata schlosseri* sp. n. Miocene Spain, GOMÉZ Mem. Com. Inv. Pal. Madrid 30 p. 96.—*V. (Cincinnati) hydrobiaformis* sp. n. Eocene France, COSSMANN Bul. Soc. Sci. nat. Nantes 5 p. 119.

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†*Vivipara* with *V. atavia* sp. n. India, ANNANDALE Rec. Geol. Surv. Ind. 51 pp. 362-363.

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†*Viviparidae*, ANNANDALE 10.

†*Viviparus* [Vide etiam *Vivipara*] *carbonarius* sp. n. Carboniferous England, GARWOOD Geol. Mag. 59 p. 291.—*V. pantanellii* nom. n. for *Vivipara fuchsi*, Pantanelli; *V. oulchyensis* nom. n. for *Paludina intermedia*, Desh.; *V. suzvicus* nom. n. for *P. varicosa*, Broun emend. Krauss 1852, WENZ Nachrbl. D. Malak. Ges. 1919 p. 76.—*V. wickhami* sp. n. Cretaceous Argentina, DOELLO-JURADO Physis B. Aires 5 p. 329.

LITIOPIDAE, ADEORBIIDAE, JEFFREYS-
IDAE, SKENEIDAE, ASSIMINEIDAE,
TRUNCATELLIDAE.

Assiminia leptodonta sp. n. Portuguese
S. E. Africa, CONNOLLY Ann. Mag. Nat.
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Diala leithii, TOMLIN 598.—D., DALL
165.

†*Litiopidae*, PILSBRY 473 p. 376.

†*Skenia planorboides* sp. n. Pleistocene
Japan, YOKOYAMA J. Coll. Sci. Tokyo
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Truncatella, BOETTGER 65.

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IDAE, PSEUDOMELANIIDAE, NERINE-
IDAE, CERITHIIDAE, VERMETIDAE.

Acrostoma with *A. variabilis* varr. n.
laevis, *semilaevigata*, *subspinata* India,
ANNANDALE Rec. Ind. Mus. 22 pp. 559
562.

†*Alabina angustior* sp. n. Tertiary
Santo Domingo, PILSBRY Proc. Acad.
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Ammicla with *A. judayi* sp. n. Wis-
consin, BAKER Nautilus 35 p. 19.—A.,
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Ammicolidae, BAKER 36 p. 60.

Anculosa with *A. clipeata*, *modesta*,
torrefacta, *aldrichi*, *flexuosa*, *chocco-*
loccensis, *brevispira*, *mimica*, *lirata*,
sulcata, spp. n., Alabama River
Drainage, GOODRICH Geol. Surv. Ala-
bama Mus. Papr. 6 pp. 1-57.

†*Bezanzonia pupoidea* sp. n. Quater-
nary Peru, WOODS in BOSWORTH Geol.
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aiques pt. vi) pp. 1020-1213.—B.,
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†*Bythinia* [vide etiam *Bithynia* and
Bythinia] *gcustensis* sp. n. Eocene
France, COSSMANN Bul. soc. sci. nat.
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†*Bithynia* [vide etiam *Bithynia* and
Bythinia] *dunkeriana* nom. n. for *Palu-*
dina ovata Dunk. WENZ Nachrbl. D.
Malak. Ges. 1919 p. 69.

†*Bourguetia jacoti*, *escheri*, spp. n.,
Mesozoic, ROLLIER Abh. Schw. Pal.
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†*Brachycerithium majus*, *lacrymi-*
gerum, *clycoidale*, *ornatissimum*, *dupli-*
ciornatum, *pauciornatum*, *elegans*, *recti-*
costa, *minus*, (?) *seminudum*, *micro-*
soma, *intermedium*, *evolutum*, *carvajal-*
ensis gen. spp. & varr. n. Trias Argen-
tina, BONARELLI An. Minist. Ag. Sci.
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Bythinia [vide etiam *Bithynia* and
Bithynia] *leachi*, Shep., ASTRE 23.—B.,
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†*Bythinia gracilis subleachi* var. n.
Tertiary Germany, GOTTSCHICK Arch.
Moll. Frankfurt 54 p. 109.

†*Cerithiidae* with *Cerithium obesum*
ventricosior, o. *harrisi* varr. n. Tertiary
Santo Domingo, PILSBRY Proc. Acad.
Nat. Sci. Philad. 73 pp. 369-376.—C.
with *Cerithium* (*Vulgocerithium*) *provari-*
cosum, C. (*Ptychocerithium*) *salloma-*
cense, *bardiei*, *pseudo-crenatum*, C.
(*Chondrocerithium*) *calculosum* var.
aequigraniferum, *subrubiginosum*; *Rhino-*
clavis leognanensis, R. (*Semivertagus*)
pupaeformis varr. *Telescopium pseudo-*
obeliscus var. *spinaloconicum*; *Tere-*
bralia bidentatum var. *percingulata*;
Pirenella inconstans var. *transiens*; *Bil-*
tium subgranosum var. *evolutum* varr. n.
B. *benoisti*, *asperulaum*, *canejanense*;
Semibitium octoliratum duvergieri, *per-*
granulosa, *vasconiensis*, spp. n.; *Colinia*
bearnensis, *degrangeri*; *Tenuicerithium*
imbricatarium; *Hemicerithium vignali*,
stephanense; *Potamides derelictus*, *per-*
suturatus, *benoisti*; *Escoffieria* ? *degran-*
gei, spp. & varr. n., *Tympanotonus mar-*
garilaceus mut. n. *bearnensis*; Tertiary,
COSSMANN & PEYROT Act. soc. linn.
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†*Cerithiopsidae* with *C. vignali*, *merig-*
nacensis, *sigmoidea*, C. (*Dizoniopsis*)
aquilaniensis; *Newtoniella* (?) *degran-*
gei; N. (*Seila*) *cyrtogrya*, *cabanacensis*;
Laecocochlis ? *inopinata*, spp. n., Tertiary
COSSMANN & PEYROT Act. soc. linn.
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Cerithiopsis dispar sp. n. Masatierra,
ODHNER Nat. hist. of Juan Fernandez
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†*Cerithiopsis nodosocostatus*, C. (*Seila*)
trisulcatus, spp. n., Pleistocene, Japan,
YOKOYAMA J. Coll. Sci. Tokyo 44 p.
73.—C. *poisoti* sp. n. Eocene France,
COSSMANN Bul. soc. sci. nat. Nantes 5
p. 100.

†*Cerithium bodenbenderi* sp. n. Lias Argentina, BEHRENDSEN Act. Acad. Ci. Cordoba 7 pp. 168-222.—*C. costaricensis* sp. n. Miocene Costa Rica, OLSSON Bul. Amer. Pal. 39 p. 143.—*C. ferruginea, nigraquarum, dupasquieri*, spp. n., Mesozoic, ROLLIER Abh. Schw. Pal. Ges. 44 pp. 86-89.—*C. inaequicostatum* sp. n. Cretaceous N. Zealand, WILCKENS Pal. Bul. Geol. Surv. N. Z. 9 p. 8.—*C. infranodatum, grillanum*, spp. n., Tertiary Peru, SPIEKER Johns Hopkins Univ. Stud. Geol. 3 pp. 56-57.—*C. paytense* Tertiary; *C. negrilosense, chalwini* Quaternary Peru, spp. n., WOODS in BOSWORTH Geol. of Peru 1922 pp. 87-88.—*C. (Gourmyia?) njalindungense, C. (Vertagus) merangianum, C. (V.?) augsanum*, spp. n., Java, MARTIN Samml. Geol. Reichsmus. Leiden 1 Abt 2 Heft 3 1921 pp. 469-470: *C. (Hemicerithium) hillegondae* sp. n. Java op. cit. Heft 4 1922 p. 471.—*C. (Tiaracerithium) vasseuri* sp. n. Eocene France, COSSMANN Bul. soc. sci. nat. Nantes 5 p. 92.—*C. ? ammonianum, quinquecinctum*, spp. n., Lias, Germany, SCHNITTMANN Zs. D. geol. Ges. Berlin 74 p. 24.

†*Clavocerithium* gen. n. [*Cerithiidae*] Eocene France, COSSMANN Bul. soc. sci. nat. Nantes 5 p. 94.

†*Diastoma americanum* sp. n. Quaternary, WOODS in BOSWORTH Geol. of Peru 1922 p. 92.

†*Diastomidae* with *Diastoma ultimum* sp. n. Tertiary, COSSMANN & PEYROT Act. soc. linn. Bordeaux 73 pp. 313-317.

Digonostoma with *D. textum* sp. n. Manipur, ANNANDALE Rec. Ind. Mus. 22 pp. 340-343.

Digyreidum bourguignati, Pal., ASTRE 28.

†*Dinocochlea ingens* gen. & sp. n. Lower Cretaceous England WOODWARD Geol. Mag. 59 pp. 242-247.

†*Exochstoma cossmanni* sp. n. Eocene Nigeria, NEWTON Geol. Surv. Nigeria 3 p. 45.

†*Favus (?) legunitensis* sp. n. Tertiary Peru, WOODS in BOSWORTH Geol. of Peru 1922 p. 86.

Fenella, DALL 163.

†*Goniocochla striata, striato-spinata, spinata* and var. *brachyspira, nodosa* and var., *evolutior*, gen. spp. & varr. n., Trais, Argentina, BONARELLI An. Minist. Ag. Sec. Geol. Buenos Aires 15 p. 72.

†*Hydrobia calderoni, romani*, spp. n., Miocene, Spain, GOMÉZ Mem. Com. Inv. Pal. Madrid 30 pp. 104-105.—*H. dalli* nom. n. Tertiary, WENZ Senckenbergiana Frankfurt a. M. 4 p. 6.—*H. serresi* nom. n. for *Paludina affinis*, Serres; *H. brusini* nom. n. for *H. ? incerta*, Brus.; *H. hermitei* nom. n. for *H. (Paludestrina) tournoueri*, Herm., WENZ Nachrbl. D. Malak. Ges. 1919 p. 72.

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†*Hypsipleura ? alta, angulicosta, binolata*, spp. n., Trias Argentina, BONARELLI An. Minist. Ag. Sec. Geol. Buenos Aires 15 p. 71.

†*Katosia* with *K. zygopleuroides* and var. *elator*, *K. communis, rapidescens, concoidea, pseudovetusta, recticosta, carvajalensis, baculoides, clathrata, brachyspira, obliquecosta*, var. & spp. n., Trias, Argentina, BONARELLI An. Minist. Ag. Sec. Geol. Buenos Aires 15 p. 71.

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†? *Macrochilina rhenana* sp. n. Devon Germany, SPIESTERSBACH Jahrb. geol. Landesanst. 38 T. 1 p. 507.—*M. KIRCHNER* 241 pp. 240-245.

†*Melanatria dimorphica* sp. n. Quaternary Peru, WOODS in BOSWORTH Geol. of Peru 1922 p. 83.

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†*Melaniidae*, PILSBRY 473 p. 379.

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Melanopsis, GERMAIN 237.

†*Melanopsis pallaryi* nom. n. for *M. (M.) acuminata*, Pallary; *M. albasensis* nom. n. for *M. (Canthidomus) nodosa*, Don.; *M. tinnyensis* nom. n. for *M. sinzowi*, Lör, WENZ Nachrbl. D. Malak. Ges. 1919 p. 73.—*M. (Lyrcæa) pachecoi* sp. n. Miocene Spain, GOMÉZ Mem. Com. Inv. Pal. Madrid 30 p. 108.

†*Micromelania graeca* nom. n. for *Melania elegans*, Fuchs, WENZ Nachrbl. D. Malak. Ges. 1919 p. 73.

†*Modulidae*, COSSMANN & PEYROT 150 p. 319.—*M.*, PILSBRY 473.

†*Morgania magna* Tertiary; *M. costata* Quaternary Peru, spp. n., WOODS in BOSWORTH Geol. of Peru 1922 pp. 82 83.

Paludestrina confusa, OLDHAM 447.—*P. jenkinsi*, BACCHUS 32.—*P. j.*, CHRISTY 118.—*P. ventrosa*, ROBSON 522.

Paludomus pustulosa sp. n. Manipur, ANNANDALE Rec. Ind. Mus. 22 p. 563.

†*Pirenella confusa* sp. n. Eocene France, COSSMANN Bul. soc. sci. nat. Nantes 5 p. 99.

Pleuroceridae, BAKER 36 p. 59.

†*Potamides occidentalis* sp. n. Quaternary Peru, WOODS in BOSWORTH Geol. of Peru 1922 p. 90.—*P. ormei* var. n. *infraliratus* Tertiary Peru, SPIEKER Johns Hopkins Univ. Stud. Geol. 3 p. 58.—*P.* with *P. praecinctus* mut. n. *ultracinctus* sp. n. Eocene France, COSSMANN Bul. soc. sci. nat. Nantes 5 pp. 95–97.—*P. (Tympantotonus) merangianus*, *P. (Terebralia) augsananus*, spp. n., Tertiary, MARTIN Samml. geol. Reichsmus 1 pp. 472–473.

†*Procerithium (Rhabdocolpus) gentili* sp. n. Lias Morocco, COSSMANN & ARARD Bul. soc. géol. Paris 21 p. 158.

†*Protofusius saltensis*, *andinus*, *convexigyrus*, gen. & spp. n., Trias, Argentina, BONARELLI An. Minist. Ag. Sec. Geol. Buenos Aires 15 p. 73.

†*Pseudamicola ultramontana* nom. n. for *Hydrobia (Paludina) immutata*, Cap., WENZ Nachrbl. D. Malak. Ges. 1919 p. 74.

†*Pyrgula capellinii* nom. n. for *Hydrobia incerta*, Cap., WENZ Nachrbl. D. Malak. Ges. 1919 p. 75.

†*Rhabdoconcha* (?) *dubia*, sub-*contracta*, spp. n., Trias Argentina, BONARELLI An. Minist. Ag. Sec. Geol. Buenos Aires 15 p. 71.

†*Siliquaria modesta* Dall var. n. *limonensis* Miocene Costa Rica, OLSSON Bul. Amer. Pal. 39 p. 147.

†*Spirostylus elegans* sp. n. Trias Argentina, BONARELLI An. Minist. Ag. Sec. Geol. Buenos Aires 15 p. 71.

†*Stephanocosmia disputabilis*, *tyrscicina*, *frecuens*, *micracantha*, spp. n., Trias Argentina, BONARELLI An. Minist. Ag. Sec. Geol. Buenos Aires 15 p. 71.

†*Telescopium peruvianum* sp. n. Tertiary, WOODS in BOSWORTH Geol. of Peru 1922 p. 91.

†*Teliostoma atrardi* sp. n. Eocene France, COSSMANN Bul. soc. sci. nat. Nantes 5 p. 98.

†*Tenagodes* with *T. anguinus* mut. n. *miocaenicus* Tertiary, COSSMANN & PEYROT Act. soc. linn. Bordeaux 73 pp. 88–91.

Tiara tuberculata, CAWSTON 104.

Trifora [vide etiam *Triforis* and *Triphora*] *basalis* sp. n. Masatierra, ODHNER Nat. hist. of Juan Fernandez 3 2 p. 223 figs.

†*Triforidæ* with *Triforis raulini*, *T. (Epetrium) peyreirensis*, spp. n., *T. adversa* mut. n. *miocaenica*, *T. papaveracea* var. n. *inflexicosta* Tertiary, COSSMANN & PEYROT Act. soc. linn. Bordeaux 73 pp. 303–313.

†*Triforis* [vide etiam *Trifora* and *Triphora*] *multigyrata* sp. n. Pleistocene Japan, YOKOYAMA J. Coll. Sci. Tokyo 44 p. 74.

†*Triphora* [vide etiam *Trifora* and *Triforis*] (*Ogivia*) *gymna* sp. n. Eocene France, COSSMANN Bul. soc. sci. nat. Nantes 5 p. 102.

†*Triphoridae* [vide etiam *Triforidae*] PILSBRY 473 p. 369.

†*Tympantotonus lagunitensis* sp. n. Tertiary, WOODS in BOSWORTH Geol. of Peru 1922 p. 90.

†*Tyrsoecus andinus*, *moniliformis*, *perarmatus*, spp. n., Trias, Argentina, BONARELLI An. Minist. Ag. Sec. Geol. Buenos Aires 15 p. 71.

†*Vermetidae*, PILSBRY 473. p. 376.

†*Vermetus* with *V. benoisti*, *leognanensis*, *linderi*, spp. n., *V. (Petalocochus) intortus* var. n. *colligata*; *V. (Bivonia) sacyi*, *V. (Elliptovermetus) breigneti*, spp. n., *V. (Burtinella) c. f. semisurrectus* Biv. mut. *antecedens*, *V. (Lemintina) arena-rius* L. mut. *pseudodentifer* and *arcus-ferens* mutt. n.; *V. (Spiroglyphus?) desmoulinsi* sp. n. Tertiary, COSSMANN & PEYROT Act. soc. linn. Bordeaux 73 pp. 68-85.—*V. (Lemintina) echinulatus* sp. n. Eocene France, COSSMANN Bull. soc. sci. nat. Nantes 5 p. 103.

†*Vermicularia*, COSSMANN & PEYROT 150 p. 86

†*Zygopleura cossmanni* sp. n. Lias Indo-China, MANSUY Mém. serv. géol. Indochine 6 p. 19.—*Z.* with *Z. turgida*, *paucinodosa*, *spincostata*, *multicostata*, *pustulosa*, *maimarensis*, *argentina*, spp. n., Trias Argentina, BONARELLI An. Minist. Ag. Sec. Géol. Buenos Aires 15 p. 70.

CAECIDÆ, TURRITELLIDÆ, STRUTHIO-LARIDÆ, CHENOPIDÆ, STROMBIDÆ, XENOPHORIDÆ.

†*Alaria acute-carinata* Jura; *A. acuta* Cretaceous, spp. n., Argentina BEHRENDSEN Act. Acad. Ci. Cordoba 7 p. 192.

†*Arrhoges haastianus* sp. n. Cretaceous N. Zealand, WILCKENS Pal. Bul. Geol. Surv. N. Z. 9 p. 9.—*A. (Pseudodiartema) palmata* gen. & sp. n. Lower Cretaceous France, GILLET Bul. soc. géol. Paris 21 p. 28.

†*Cascidas*, PILSBRY 473 p. 378.

†*Caecum*, COSSMANN & PEYROT 150 p. 65.

†*Chenopus*, BEHRENDSEN 49 p. 168.

†*Dicroloma* with *D. (Anchiura) longiscala*, Buv. mut. n. *wassyensis* Barremian France, GILLET Bul. soc. géol. Paris 21 p. 30.—*D. (Pietteia) huguenini* sp. n. Lias France, RICHE & ROMAN Trav. Lab. géol. Lyon 1 p. 96.

†*Harpagodes magnificus*, *heimi*, spp. n., Mesozoic, ROLLIER Abh. Schw. Pal. Ges. 44 pp. 90-92.

Mathilda [vide etiam *Mathildia*] *brevicula* sp. n. Loyalty Isds., BAVAY J. conchyliol. Paris 67 p. 65.

†*Mathildia* [vide etiam *Mathilda*] *nja-lindungensis* sp. n. Tertiary, MARTIN Samml. geol. Reichsmus. 1 p. 474.—*M.*

peyroti sp. n. Tertiary, COSSMANN & PEYROT Act. soc. linn. Bordeaux 73 p. 177.

†*Mesalia*, COSSMANN & PEYROT 150 p. 64.

†*Orthaulax inornatus altilis* subsp. n. Tertiary Santo Domingo, PILSBRY Proc. Acad. Nat. Sci. Philad. 73 p. 369.

†*Perissoptera waiparaensis*, *novoseelandica*, spp. n., Cretaceous, N. Zealand, WILCKENS Pal. Bul. Geol. Surv. N. Z. 9 pp. 11-13.

†*Protoma* with *P. quadriplicata* mut. n. *inaequiplicata*; *P. vasconiensis*, *dense-cingulata*, spp. n., Tertiary, COSSMANN & PEYROT Act. soc. linn. Bordeaux 73 pp. 52-64.

†*Pseudophorus*, KIRCHNER 341 p. 235.

†*Rimella (Dientomochilus) promensis* sp. n. Tertiary Burma, VREDENBURG Rec. geol. Surv. Ind. 51 p. 291.

†*Rostellaria bidigitata*, *unidigitata*, spp. n., Eocene, Nigeria, NEWTON Geol. Surv. Nigeria 3 pp. 12-14.

†*Semiterebellum suturocostatum*, *elongatum*, spp. n., Eocene, Nigeria, NEWTON Geol. Surv. Nigeria 3 pp. 15-17.

†*Strombidae*, PILSBRY 473 p. 366.

†*Struthiolariopsis similis* sp. n. Cretaceous N. Zealand, WILCKENS Pal. Bul. Geol. Surv. N. Z. 9 p. 17.

Turritella, PEILE 465.

†*Turritella altilira* varr. *chiriquiensis*, *costaricensis*, *T. exoleta* var. *limonensis*, *T. oreodoxa* varr. & sp. n. Miocene Costa Rica, OLSSON Bul. Amer. Pal 39 pp. 150-152.—*T. alturana* nom. n. for *T. plana*, Nils.; *T. flicincta* var. *varicosta*, *inca* var. *trila* varr. n.; *T. nelsoni* nom. n. for *T. suturalis*, Nels.; *T. nelsoni* var. *trullissata*, *infracarinata* var. *zorritensis* varr. n.; *T. prenuncia* sp. n.; *T. robusta* var. n. *abrupta*; *T. charama* sp. n., SPIEKER Tertiary Peru Johns Hopkins Univ. Stud. Geol. 3 pp. 62-86.—*T. bantamensis* var. n. *producta* sp. n. Tertiary, MARTIN Samml. geol. Reichsmus. 1 p. 474.—*T. graysonensis*, *worthensis*, spp. n., Cretaceous U.S.A., ADKINS Univ. Texas Bul. 1856 pp. 140-142.—*T. halensis* var. [? n.] *alpha* Oligocene Porto Rico MITCHELL Sci. Surv. Porto Rico 1 p. 285.—*T. mauriana* sp. n. Eocene Nigeria, NEWTON Geol. Surv. Nigeria 3 p. 48.—*T. negritosensis*, *lissoni*, *dickersoni*, *bosworthi*, *douvillei*,

anceps, *annectens*, spp. n., Quaternary Peru, Woods in BOSWORTH Geol. of Peru 1922 pp. 78-81.—*T. noeltingi* sp. n. Tertiary Burma, VREDENBURG Rec. geol. Surv. Ind. 51 p. 292.—*T. pinfoldi* sp. n. Tertiary India, VREDENBURG Rec. Geol. Surv. Ind. 51 p. 313.—*T. solitaria* sp. n. Cretaceous N. Zealand, WILCKENS Pal. Bul. Geol. Surv. N. Z. 9 p. 35.—*T.* with *T. terebralis* varr. n. *grata*, *aguensis*; *T. t.* mut. n. *aturensis*; *T. pseudogradata*, *ceasensis*, *stephanensis* and var. *venusta*, spp. & var. n.; *T. (Zaria) aquitaniensis* nom. emend.; *T. (Z.) secans*, *raulini*, *faluciosa*, *T. (Archimediella) bearnensis*, *vasconiensis* and var. *terebriformis*, *pythagorais* Hil. var. *degrangei*; *T. (Haustator) syrtica*, *peyerensis*, *touzini*, *benoisti*, spp. & varr. n.; *T. (Peyrotia) strangulata* mut. n. *grossa*, Tertiary, France, COSSMANN & PEYROT Act. soc. linn. Bordeaux 73 pp. 5-52.—*T.* BEHRENDSEN 49 p. 198.

†*Turritellidae*, PILSBRY 473 p. 377.

†*Tugurium nigeriense* sp. n. Eocene Nigeria, NEWTON Geol. Surv. Nigeria 3 p. 51.

†*Xenophoridae*, PILSBRY 473 p. 385.

CAPULIDÆ, HIPponyCIDÆ, CALYPTRAIDÆ, NARICIDÆ, NATICIDÆ, LAMELLARIIDÆ.

†*Amauropsis burnsi meridionalis* subsp. n. Tertiary Santo Domingo, PILSBRY Proc. Acad. Nat. Sci. Philad. 73 p. 387.—*A. (?) andina* sp. n. Trias Argentina, BONARELLI An. Minist. Ag. Sec. Geol. Buenos Aires 15 p. 73.

†*Ampullina, colosse*, *A. (Euspira) montmollini*, spp. n., Mesozoic, ROLLIER Abh. Schw. Pal. Ges. 44 pp. 75-77.

†*Calyptraea solitaria* sp. n. Cretaceous N. Zealand, WILCKENS Pal. Bul. Geol. Surv. N.Z. 9 p. 6.

†*Calyptraeidae*, PILSBRY 473 p. 385.

†*Capulidae*, PILSBRY 473 p. 384.

Crepidula fornicata, BELCHER 50.—*C. fornicata*, ORTON 453 & 454.

†*Crepidula falconeri* sp. n. Eocene Nigeria, NEWTON Geol. Surv. Nigeria 3 p. 58.—*C. hochstetteriana* sp. n. Cretaceous N. Zealand, WILCKENS Pal. Bul. Geol. Surv. N. Z. 9 p. 5.

†*Crepidacella limonensis* sp. n. Miocene Costa Rica, OLSSON Bul. Amer. Pal. 39 p. 143.

†*Diaphorostoma*, REED 503 p. 307.

†*Hipponicidae*, PILSBRY 473 p. 384.

†*Hipponyx digitata* sp. n. Eocene France, COSSMANN Bul. soc. sci. nat. Nantes 5 p. 121.

†*Lunatia humilis, bulbosa*, spp. n., Devon, Germany, SPRIESTERSBACH Jahrb. geol. Landesanst. 38 T. 1 pp. 305-306.

†*Megatylotus bourcarti* sp. n. Oligocene Albania, COSSMANN & BOURCART Bul. soc. géol. Paris 21 p. 168.

†*Natica gastelumendii* sp. n. Cretaceous BERRY & STINGEWALD Johns Hopkins Univ. Stud. Geol. 2 p. 86.—*N. selwyniana, ingrata*, spp. n., Cretaceous N. Zealand, WILCKENS Pal. Bul. Geol. Surv. N. Z. 9 p. 6.—*N. youngi* Maury var. n. *cocleana* Miocene Costa Rica, OLSSON Bul. Amer. Pal. 39 p. 155.—*N.* with *N. bodenbenderi* sp. n. Jura Argentina, BEHRENDSEN Act. Acad. Ci. Cordoba 7 pp. 196-208.

†*Naticidae*, PILSBRY 473 p. 386.

†*Platyceras dorsicarina, paulospirale, distortum, loratum, eegense*, spp. n., Devon, Germany, FUCHS Abh. geol. Landesanst. 79 pp. 64-69.—*P.*, REED 506 p. 308.—*P.*, YAKOWLEV 660.

†*Platystoma*, KIRCHNER 341 p. 240.

Polinices [vide etiam Polynices], COPELAND 144.

†*Polynices [vide etiam Polinices] porcana* sp. n. Tertiary Peru, SPIEKER Johns Hopkins Univ. Stud. Geol. 3 p. 88.

†*Sinum africanum* sp. n. Eocene Nigeria, NEWTON Geol. Surv. Nigeria 3 p. 57.—*S. carolamum* sp. n. Tertiary Peru, SPIEKER Johns Hopkins Univ. Stud. Geol. 3 p. 89.

†*Tylostoma*, BEHRENDSEN 49 p. 198.

†*Zinolia speciosa* gen. & sp. n. Pliocene Italy, ISSEL Atti soc. lig. Genova 1 p. 122.

TRICHOTROPIDÆ, JANTHINIDÆ, CYPRAEIDÆ, CYMATIIDÆ, CASSIDIDÆ, TONNIDÆ, CANCELLARIIDÆ.

†*Amphiperas nigeriensis* sp. n. Eocene Nigeria, NEWTON Geol. Surv. Nigeria 3 p. 18.

†*Bursa crassa proavus* subsp. n. Tertiary Santo Domingo, PILSBRY Proc. Acad. Nat. Sci. Philad. 73 p. 360.

†*Cassidaria echinophora* var. n. *promensis* Tertiary Burma, VREDENBURG Rec. Geol. Surv. Ind. 51 p. 290.

†*Cassidea birmanica* sp. n. Tertiary Burma, VREDENBURG Rec. geol. Surv. Ind. 51 p. 290.

†*Cassididae*, PILSBRY 473 p. 360.

†*Cymatiidae*, PILSBRY 473 p. 356.

Cypraea with *C. dillwyni* nom. n. for *C. margarita*, Gray; *C. liliputana* nom. n. for *T[rivia] scabriuscula*, Koenen; *C. massauensis* nom. n. for *C. gemmula*, Weink, SCHILDER Proc. Malac. Soc. 15 pp. 98-122.—*C. pacifica*, BUTTON 97.

†*Cypraea angustirima* sp. n. Tertiary Peru, SPIEKER Johns Hopkins Univ. Stud. Geol. 3 p. 55.—*C. parisimina*, *almirantensis*, spp. n., Miocene Costa Rica, OLSSON Bul. Amer. Pal. 39 pp. 139-140.—*C. siphonata* sp. n. Tertiary, CHAPMAN Proc. R. Soc. Vict. 35 p. 12.—*C. (Bernayia) singuensis*, *C. (Cypraco-trivia) oppenheimi*, spp. n., Tertiary Burma, VREDENBURG Rec. geol. Surv. Ind. 51 p. 291.—*C.*, SCHILDER 537.

†*Cypraeidae* with *Cypraea raymond-robertsi*, *campbelliana*, spp. n., Tertiary Santo Domingo, PILSBRY Proc. Acad. Nat. Sci. Philad. 73 pp. 364-366.

†*Doliidae*, PILSBRY 473 p. 363.

†*Erato obesula* sp. n. Tertiary, CHAPMAN Proc. R. Soc. Vict. 35 p. 12.

†*Eutritonium (Colubraria) augsanum*, *E. (Lampusia) njalindungense*, spp. n., Tertiary, MARTIN Samml. geol. Reichsmus. 1 p. 467.

†*Hilda turriculata* sp. n. Eocene Nigeria, NEWTON Geol. Surv. Nigeria 3 p. 29.

†*Ranella antiqua*, *R. (Pseudobursa) promensis*, spp. n., Tertiary, Burma, VREDENBURG Rec. geol. Surv. Ind. 51 p. 289.

†*Sconsia laevigata*, Sow. var. *gabbi*, *S. bocasensis*, *cocleana*, spp. n., Miocene Costa Rica, OLSSON Bul. Amer. Pal. 39 pp. 136-118.

Triton with *T. (Cumia) var. n. biplex* Sicily, COEN Riv. ital. paleont. 28 pp. 21-23.

Trivia with *T. antillarum* nom. n. for *T. subrostrata*, Gray; *T. nix* nom. n. for *T. nivea*, Sow; *T. occidentalis* nom. n. for *T. pulla*, Gask, SCHILDER Proc. Malac. Soc. 15 pp. 98-122.

†*Trivia noellingi* sp. n. Tertiary Burma, VREDENBURG Rec. geol. Surv. Ind. 51 p. 291.—*T.*, SCHILDER 537.

†*Uxia bruxelliensis* sp. n. Eocene Belgium, LÉRICHE Bul. Soc. Geol. Belge 31 p. 184.

SOLARIIDAE, SCALARIIDAE.

†*Acrilla (Littoriniscala) nerviensis* sp. n. Eocene Belgium, LÉRICHE Bul. soc. géol. Belge 31 p. 193.

†*Architectonicidae*, PILSBRY 473 p. 379.

†*Colpomphalus abrardi* sp. n. Lias Morocco, COSSMANN & ABRARD Bul. soc. géol. Paris 21 p. 156.

†*Discohelix crussoliensis*, *D. (Colpomphalus) bathmis*, spp. n., Lias, France, RICHE & ROMAN Trav. Lab. géol. Lyon 1 pp. 102-104.—*D. dissymetrica* sp. n. Lower Cretaceous France, GILLET Bul. soc. géol. Paris 21 p. 27.

†*Epitonidae* with *Epitonium santodominganum*, *amosbrowni*, spp. n., Tertiary, Santo Domingo, PILSBRY Proc. Acad. Nat. Sci. Philad. 73 pp. 387-389.

†*Euomphalus calliferus* sp. n. Devon Germany, SPRIESTERSBACH Jahrb. geol. Landesanst. 38 T. 1 p. 499.—*E.* with *E. altus*, *basinodosus*, spp. n., Devon, Germany, KIRCHNER Verh. nat. hist. Ver. Bonn 71 pp. 314-227.

†*Platychisma allandalensis* sp. n. Permo-carboniferous New South Wales, MITCHELL Proc. Linn. Soc. N. S. Wales 47 p. 278.

†*Scala (Hyaloscala) minuta* var. n. *gigantea* Tertiary GRIPP Zs. D. geol. Ges. Abh. Berlin 74 p. 188.

Scalaria (Clathrus) juanina sp. n. Masatierra, ODHNER Nat. hist. of Juan Fernandez 3 2 p. 224 fig.

†*Scalaria azumana*, *kazusensis*, *yamakawai*, *conjuncta*, *subfrondicula*, *picturata* spp. n., Pleistocene, Japan, YOKOYAMA J. Coll. Sci. Tokyo 44 pp. 86-89.—*S. (Cirsotrema?) pacifica* sp. n. Cretaceous N. Zealand, WILCKENS Pal. Bul. Geol. Surv. N. Z. 9 p. 8.—*S. (Hirtoscala) elegans* Ris. var. n. *duplex* Pliocene San Marino, NELLI Scritt. var. Geog. Geol. 1922 p. 102.

†*Scalidae* with *Nobiliscala remota*; *Clathrus newvillei*, *neptunei*; *Fuscoscala thevenini*, *castor*, *pollux*, *inconsiderata*, *imputata*, *abietorum*, *recessa*, *dubaleni*,

incredulis, imperita; *Eburniscala leognanensis*; *Avalitiscala stupefacta*; *Foveoscala recidiva*; *Hirtoscala sacyi*, spp. n., *Lepidoscala* subgen. n. with *L. biali* and varr. *intangibilis* and *recollecta* sp. & varr. n.; *Linctoscala burdigalensis*; *Hyaloscala micans*; *Mirilliscala superlativa, illuminata*; *Spiniscala merignacensis* var. *polycolata*; *S. touzini*, *perfragilis*, *trivialis*, *orthezensis*, *constituta*, *banoni* var. *unctai* *Gyroskala neovasconensis, despecta, suavis*; *Circuloscala indubitata*; *Acrilla vignalii, silentina*; *Dentiscala rozieri*, spp. & varr. n., Tertiary, COSSMANN & PEYROT Act. soc. linn. Bordeaux 73 pp. 91-177.

†*Solarium augsanum* sp. n. Tertiary, MARTIN Samml. geol. Reichsmus. 1 p. 475.—*S. nelsoni* sp. n. Quaternary Peru, Woods in BOSWORTH Geol. of Peru 1922 p. 76.

†*Stellaxis bicingulata* sp. n. Eocene Nigeria, NEWTON Geol. Surv. Nigeria 3 p. 52.

†*Straparollus wachlbergi, lithoides, minimus*, spp. n., Devon, Germany, KIRCHNER Verh. nat. hist. Ver. Bonn 71 pp. 212-213.

†*Subulicala* [? *Subuliscala*] *wolfiana* sp. n. Tertiary, GRIPP Zs. D. geol. ges. Abh. Berlin 74 p. 184.

†*Torinia elegantula* sp. n. Pleistocene Japan, YOKOYAMA J. Coll. Sci. Tokyo 44 p. 78.

PYRAMIDELLIDÆ, STROMBIFORMIDÆ.

†*Anisocycla allixi* sp. n. Eocene France, COSSMANN Bul. soc. sci. nat. Nantes 5 p. 126.

†*Euchrysalis*, KIRCHNER 341 p. 255.

†*Eulima (Leiostraca) uncinata, tokunagei, glabroides, krishna*, spp. n., Pleistocene, Japan, YOKOYAMA J. Coll. Sci. Tokyo 44 pp. 89-91.

†*Holopella*, KIRCHNER 341 p. 254.

†*Loxonema* with *L. incurvilineatum, paucicostatum arduum, retrostriatum, carinatum* and c. var. *sulcata, spiralglobosum, paludinosides, ginzenbergensis*, spp. & var. n., Devon, Germany, KIRCHNER Verh. nat. hist. Ver. Bonn 71 pp. 246-254.

Menestho, BARTSCH 46.

†*Odontostomia (Nisostoma) mogunensis* sp. n. Stampian, COSSMANN Essais pal. comp. Paris 1921 p. 325.

†*Odostomia (Odostomida) mogindo* sp. n. Tertiary Santo Domingo, PILSBRY Proc. Acad. Nat. Sci. Philad. 73 p. 393.—*O. (Odostomia) gordonis, shimosensis, kizadiensis, venusta, toneana, suboxia, O. (Odetta) neofelix, O. (Egilina) marieloides*, spp. n., Pleistocene Japan, YOKOYAMA J. Coll. Sci. Tokyo 44 pp. 95-100.

Pyramidella insularum nom. n. for *P. canaliculata* Sow. PILSBRY Proc. Acad. Nat. Sci. Philad. 73 p. 307.

†*Pyramidella ameghinoi, depontalieri*, spp. n., Astian, COSSMANN Essais pal. comp. Paris 1921 pp. 323-324.—*P. (Agatha) virgo* (Ads.) var. *brevis*, *P. (Iphiana) mira, siva* var. & spp. n., Pleistocene, Japan, YOKOYAMA J. Coll. Sci. Tokyo 44 pp. 92-94.

Pyramidellidae, CHRISTENSEN 117 pp. 97-98.

†*Pyramidellidae*, PILSBRY 473 p. 389.

†*Syrnola (Pachysyrnola) faurai* sp. n. Pliocene Catalonia, COSSMANN Essais pal. comp. Paris 1921 p. 325.—*S. (Puposyrnola) pliocaenica* sp. n. Tertiary, COSSMANN Essais pal. comp. Paris 1921 p. 325.

†*Turbonilla (Ptycheulimella) misella, T. (Chemnitzia) imbana, kidoensis, teganumana, sematana, T. (Mormula) scrobiculata, T. (Pyrgolampros) planicosata, T. (Strioturbonilla) sagamiana, pacifica, T. (Careliopsis) obscura, angulifera*, spp. n., Pleistocene, Japan, YOKOYAMA J. Coll. Sci. Tokyo 44 pp. 100-106.

ATLANTIDÆ.

†*Atlantidae*, PILSBRY 473 p. 314.

STENOGLOSSA.

TURBINELLIDÆ, FASCIOLARIIDÆ, MITRIDÆ.

Aptyxis, COEN 125.

†*Bulbifusus nigeriensis* sp. n. Eocene Nigeria, NEWTON Geol. Surv. Nigeria 3 p. 35.

†*Clavilithes costarius* var. n. *gronmieri* Eocene Belgium, LÉRICHE Bul. soc. géol. Belge 31 p. 189.—*C. harrisi, peruvianus, pacificus, incertus*, spp. n., Quaternary, Woods in BOSWORTH Geol. of Peru 1922 pp. 97-100.

†*Cryptorhytis vulnerata* sp. n. Cretaceous N. Zealand, WILCKENS Pal. Bul. Geol. Surv. N. Z. 9 p. 21.

Cylindra, PEILE 464.

†*Fasciolaria macdonaldi* sp. n. Miocene Costa Rica, OLSSON Bul. Amer. Pal. 39 p. 106.

†*Fascioliidae*, PILSBRY 473 p. 345.

†*Fusinus youngi* sp. n. Tertiary, CHAPMAN Proc. R. Soc. Vict. 35 p. 14.

Fusus, BARTSCH 46.

†*Fusus augsanana* sp. n. Tertiary, MARTIN Samml. geol. Reichsmus 1 p. 451.—*F. eximius* var. *stolleyana* var. n. Tertiary, GRIPP Zs. D. geol. Ges. Abh. Berlin 74 p. 188.—*F. miocosmius*, *honensis*, spp. n., Miocene Costa Rica, OLSSON Bul. Amer. Pal. 39 pp. 103–104.

†*Lathyrus* [vide etiam *Latirus*] *indicus* sp. n. Tertiary Burma, VREDENBURG Rec. geol. Surv. Ind. 51 p. 287.—*L. njalindungensis*, *L. (Ascolathyrus) augsananus*, *L. (Peristernia) beberianus*, *merangianus*, spp. n., Tertiary, MARTIN Samml. geol. Reichsmus 1 pp. 455–457.—*L. (Lathyrulus) bourdoti* sp. n. Eocene France, COSSMANN Bul. soc. sci. nat. Nantes 5 p. 74.

†*Latirus* [vide etiam *Lathyrus*] *brevicaudatus santodomingensis* subsp. n. Tertiary Santo Domingo, PILSBRY Proc. Acad. Nat. Sci. Philad. 73 p. 345.—*L. irazu*, *taurus*, spp. n., Miocene, Costa Rica, OLSSON Bul. Amer. Pal. 39 pp. 107–108.

†*Lirafusus inopinatus* sp. n. Eocene France, COSSMANN Bul. soc. sci. nat. Nantes 5 p. 75.

†*Melongena (Pugilina) praeponderosa* sp. n. Tertiary Burma, VREDENBURG Rec. geol. Surv. Ind. 51 p. 287.

Mitra, PEILE 464.

†*Mitra hondana*, *pirula*, spp. n., Pleistocene, Japan, YOKOYAMA J. Coll. Sci. Tokyo 44 pp. 50–51.—*M. swainsoni* var. *limonensis*, *M. poas*, *M. almagrensis*, *Toula* var. *coralliophila* varr. & sp. n. Miocene, OLSSON Costa Rica Bul. Amer. Pal. 39 pp. 100–103.—*M. (Cancilla) augsanana* sp. n. Tertiary, MARTIN Samml. geol. Reichsmus 1 p. 453.

†*Mitridae*, PILSBRY 473 p. 339.

†*Neptunea*, ØYEN 456.

†*Parvisipho (Columbellisipho) conjunctispira* sp. n. Eocene France, COSSMANN Bul. soc. sci. nat. Nantes 5 p. 79.

†*Pirula* [vide etiam *Pyrula*] *condita* var. n. *sinjuensis* and *P. promensis* sp. n. Tertiary Burma, VREDENBURG Rec. geol. Surv. Ind. 51 pp. 290–291.

†*Pyrula* [vide etiam *Pirula*] *peruviana* sp. n. Tertiary Peru, SPIEKER Johns Hopkins Univ. Stud. Geol 3 p. 54.

Pusia, PEILE 464.

†*Rhopalithes africanus* sp. n. Eocene Nigeria, NEWTON Geol. Surv. Nigeria 3 p. 32.

†*Sipho (Parasipho) nipponicus* sp. n. Pleistocene Japan, YOKOYAMA J. Coll. Sci. Tokyo 44 p. 55.

†*Siphonalia dumasi* sp. n. and *S. chaussyensis* race n. *paucicostulata* Eocene France, COSSMANN Bul. soc. sci. nat. Nantes 5 p. 76.—*S. (Kelletia) iravadica* sp. n. Tertiary Burma, VREDENBURG Rec. Geol. Surv. Ind. 51 p. 287.—*S. (Kelletia) subspadicea* sp. n. Tertiary India, VREDENBURG Rec. Geol. Surv. Ind. 51 p. 310.—*S. (Pseudoneptunea) njalindungensis* sp. n. Tertiary, MARTIN Samml. geol. Reichsmus 1 p. 458.

†*Solutofusus curlewensis* sp. n. Tertiary, CHAPMAN Proc. R. Soc. Vict. 35 p. 14.

†*Streptochetus pallaryi* sp. n. Eocene France, COSSMANN Bul. soc. sci. nat. Nantes 5 p. 73.

†*Streptolathyrus ? subangulatus* sp. n. Eocene France, COSSMANN Bull. soc. sci. nat. Nantes 5 p. 72.

†*Strepsidura pacifica* sp. n. Quaternary WOODS in BOSWORTH Geol. of Peru 1922 p. 96.—*S. spirata* sp. n. Eocene Nigeria, NEWTON Geol. Surv. Nigeria 3 p. 33.

†*Sycum americanum* sp. n. Peru, WOODS in BOSWORTH Geol. of Peru 1922 p. 101.

Trophon, BARTSCH 46.

†*Tudicula alta* sp. n. Cretaceous N. Zealand, WILCKENS Pal. Bul. Geol. Surv. N. Z. 9 p. 20.

Vexillum, PEILE 464.

†*Volutospina peruviana*, *crassiuscula*, *meridionalis*, spp. n., Quaternary, WOODS in BOSWORTH Geol. of Peru 1922 p. 101–105.

†*Xancidae*, PILSBRY 473 p. 342.

†*Xancus scopulus* sp. n. Miocene Costa Rica, OLSSON Bul. Amer. Pal. 39 p. 111.

BUCCINIDÆ, NASSARIIDÆ, MURICIDÆ, PURPURIDÆ, HALIIDÆ, CANCELLARIIDÆ, PYRENIDÆ, THAIDIDÆ.

†*Alectrion ranuncula*, *merenda*, spp. n., Miocene, Costa Rica, OLSSON Bul. Amer. Pal. 39 pp. 123-124.

Babelomurex sec. n. type *Pseudomurex babelis*, Req., COEN Atti Soc. ital. sc. nat. 61 p. 68.

†*Buccinidae*, PILSBRY 473 p. 348.

†*Buccinorbis kitsoni* sp. n. Eocene Nigeria, NEWTON Geol. Surv. Nigeria 3 p. 37.

Buccinum undatum, JOHNSTONE p. 43 325.

†*Buccinum*, ØYEN 456.

†*Cancellaria multiplicis* sp. n. Eocene Nigeria, NEWTON Geol. Surv. Nigeria 3 p. 42.—*C. torquayensis* sp. n. Tertiary, CHAPMAN Proc. R. Soc. Vict. 35 p. 16.—*C.* with *C. cossmanni*, *mauryae*, *toroensis*, *plummeri*, spp. n., OLSSON Bul. Amer. Pal. 39 pp. 80-85.

†*Cancellariidae* with *Cancellaria elliptica* sp. n. Tertiary Santo Domingo, PILSBRY Proc. Acad. Nat. Sci. Philad. 73 pp. 332-334.

Columbella (Mitrella) lignaria sp. n. Masatierra, ODHNER Nat. hist. of Juan Fernandez 3 2 p. 224 fig.

†*Columbella submercatoria* sp. n. Miocene Costa Rica, OLSSON Bul. Amer. Pal. 39 p. 125.—*C. (Alia) augsanana*, *preangerensis*, *merangiana*, *njalindungensis*, spp. n., Tertiary, MARTIN Samml. geol. Reichsmus. 1 pp. 462-464.—*C. (Atilia) smithi turriculata*, *praecursor*, *masakadoi*, spp. n., Pleistocene, Japan, YOKOYAMA J. Coll. Sci. Tokyo 44 pp. 60-62.

†*Columbellidae*, PILSBRY 473 p. 350.

†*Cominella douvillei* sp. n. Eocene Nigeria, NEWTON Geol. Surv. Nigeria 3 p. 39.

†*Coralliophaga peyroti* sp. n. Eocene, COSSMANN Mém. soc. géol. Paris 23 & 24 Mém. 55 p. 68.

†*Coralliophila augsanana* sp. n. Tertiary, MARTIN Samml. geol. Reichsmus. 1 p. 466.

†*Cyllene augsanana* sp. n. Tertiary, MARTIN Samml. geol. Reichsmus. 1 p. 459.

†*Cymia henckeni tectiformis* subsp. n. Tertiary Santo Domingo, PILSBRY Proc. Acad. Nat. Sci. Philad. 73 p. 355.

†*Dorsanum de gasperii* sp. n. Pliocene San Marino, NELLI Scritt. var. geol. geol. 1922 p. 107.

Fusomurex sec. n. type *Pseudomurex alucoides*, De. Blainv., COEN Atti Soc. ital. sc. nat. 61 p. 69.

†*Halia americana* sp. n. Miocene Costa Rica, OLSSON Bul. Amer. Pal. 39 p. 79.

†*Hindsia birmanica* sp. n. Tertiary Burma, VREDENBURG Rec. geol. Surv. Ind. 51 p. 289.

Hirtomurex sec. n. type *Pseudomurex lamellosus*, Phil., COEN Atti Soc. ital. sc. nat. 61 p. 69.

†*Janiopsis nigeriensis* sp. n. Eocene Nigeria, NEWTON Geol. Surv. Nigeria 3 p. 41.

Latiomurex sec. n. type *Pseudomurex meyendorffi*, Calc., COEN Atti Soc. ital. sc. nat. 61 p. 70.

Lepadomurex subgen. n. (*L. brevis*, de Blainv.), COEN Atti Soc. ital. sc. nat. 61 p. 70.

†*Liomesus africanus* sp. n. Eocene Nigeria, NEWTON Geol. Surv. Nigeria 3 p. 38.

†*Metula harrisi* and var. *limonensis* sp. & var. n. Miocene Costa Rica, OLSSON Bul. Amer. Pal. 39 p. 116.—*M. (Celatoconus) siphoides* sp. n. Eocene France, COSSMANN Bul. soc. sci. nat. Nantes 5 p. 79.

†*Murex iravadicus* and var. *yenunensis* sp. & var. n. Tertiary Burma, VREDENBURG Rec. Geol. Surv. Ind. 51 p. 288.—*M. laqueoratus* sp. n. Tertiary Peru, SPIEKER Johns Hopkins Univ. Stud. Geol. 3 p. 51.—*M. (Favartia) gouletensis* sp. n. Eocene France, COSSMANN Bul. soc. sci. nat. Nantes 5 p. 82.—*M. (Muricidae) galliffi* sp. n. Tertiary, CHAPMAN Proc. R. Soc. Vict. 35 p. 13.—*M. (Muricopsis) merangianus* sp. n. Tertiary, MARTIN Samml. geol. Reichsmus. 1 p. 465.

†*Muricidae*, PILSBRY 473 p. 352.

†*Nassa lagunitensis* sp. n. Tertiary, Woods in BOSWORTH Geol. of Peru 1922 p. 95.—*N. (Hinia) reticulata* L. var. *tilanensis*, *N. (Niotha) schönni* Hör. and Auing, var. *manzonii* varr. n. Tertiary San Marino, NELLI Scritt. var.

Geog. Geol. 1922 pp. 111-112.—*N. (Niotha) augsanana, talahabensis*, spp. n., Tertiary, MARTIN Samml. geol. Reichsmus. 1 pp. 461-462.

Neptunea, DALL 162.—*N.*, IREDALE 309.

†*Northia northiae* Gray var. n. *miocenica* Miocene Costa Rica., OLSSON Bul. Amer. Pal. 39 p. 124.

†*Ocenebra spectata* sp. n. Pleistocene Japan, YOKOYAMA J. Coll. Sci. Tokyo 44 p. 65.

†*Peristernia insula, tortugera*, spp. n., Miocene Costa Rica, OLSSON Bul. Amer. Pal. 39 p. 100.

†*Phos moorei*, Gup. var. *costaricensis, elegans*, Gup. var. *limonensis, P. estrellensis, vetchi, beteyensis*, var. & spp. n., Miocene Costa Rica, OLSSON Bul. Amer. Pal. 39 pp. 118-122.—*P. (?) latirugatus* sp. n. Tertiary Peru, SPIEKER Johns Hopkins Univ. Stud. Geol. 3 p. 46.

†*Preangeria* gen. n. with *P. augsanana, talahabensis*, spp. n. Java, spp. n. Tertiary, MARTIN Samml. Geol. Reichsmus. 1 pp. 450-451.

†*Procancellaria parkiana* gen. & sp. n. Cretaceous N. Zealand WILCKENS Pal. Bul. Geol. Surv. N.Z. 9, p. 21.

†*Pseudoliva parinasensis, mutabilis*, spp. n., Quaternary, Woods in BOWORTH Geol. of Peru 1922 pp. 93-94.

†*Ptychosalpinx (?) dentalis* sp. n., Miocene Costa Rica, OLSSON Bul. Amer. Pal. 39 p. 109.

†*Ricinula (Morula) augsanana* sp. n. Tertiary, MARTIN Samml. Geol. Reichsmus. 1 p. 466.

†*Strombina caribaea micra* var. n. Tertiary Santo Domingo, PILSBRY. Proc. Acad. Nat. Sci. Philad. 73 p. 351.—*S. materna, cricamola, costaricensis* and var. *musanica, S. sincola, chiriquiensis*, spp. n., Miocene Costa Rica, OLSSON Bul. Amer. Pal. 39 pp. 127-130.

†*Trigonostoma decorata* sp. n. Eocene Nigeria, NEWTON Geol. Surv. Nigeria 3 p. 43.

†*Tritonidea excisa* race n. *dumasi, T. (Endopachycheilus) umbilicaris* sp. n. Eocene France, COSSMANN Bul. Soc. Sci. Nat. Nantes 5 pp. 80-81.—*T. (Cantharus) augsanana, njalindungensis*, spp. n., Tertiary, MARTIN Samml. Geol. Reichsmus. 1 p. 460.

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†*Typhis linguliferus*, Dall. var. n. *costaricensis* Miocene Costa Rica, OLSSON Bul. Amer. Pal. 39 p. 132.

TURRIDAE, TEREBRIDAE, CONIDAE.

Acrista subgen. n. [*Turridae*], HEDLEY Rec. Austral. Mus. 13 p. 285.

Anacithara gen. n. with *A. brevicostata, caelatura, exquisita, hebes, hervieri, leptalea, propinqua, rissoina, robusta, stricta, tumida* spp. n., Queensland, HEDLEY Rec. Austral. Mus. 13 pp. 300-304.

†*Ancistrostrix dalli* sp. n. Miocene Costa Rica, OLSSON Bul. Amer. Pal. 39 p. 60.

Asperdaphne nom. n. *Scabrella* Hedley with *A. amplexa, capricornea* spp. n., Queensland; *A. bela* nom. n. for *Bela tasmanica* May Tasmania; *A. compacta* sp. n. New S. Wales, HEDLEY Rec. Austral. Mus. 13 pp. 338-344.

Asthenotoma with *A. cicatrigula* sp. n. Queensland, HEDLEY Rec. Austral. Mus. 13 pp. 218-220.

†*Asthenotoma*, HEDLEY 285.

Austrodrillia with *A. raiwitisensis* nom. n. for *Drillia angasi*, Suter, HEDLEY Rec. Austral. Mus. 13 pp. 247-249.

Awateria, HEDLEY 285.

Bathytoma, HEDLEY 285.

†*Bathytoma (Epalxis) clathratula* sp. n. Eocene France, COSSMANN Bul. Soc. Sci. Nat. Nantes 5 p. 65.—*B.*, HEDLEY 285.

†*Bela gibbosa* sp. n. Eocene France, COSSMANN Bul. Soc. Sci. Nat. Nantes 5 p. 66.—*B. recticostulata* sp. n. Pleistocene Japan YOKOYAMA J. Coll. Sci. Tokyo 44 p. 44.

Borsonia, HEDLEY 285.

†*Borsonia cocoensis* sp. n. Miocene Costa Rica, OLSSON Bul. Amer. Pal. 39 p. 78.—*Borsonia B. (Cordieria) bureaui* sp. n. Eocene France, COSSMANN Bul. Soc. Sci. Nat. Nantes 5 p. 66.—*B.*, HEDLEY 285.

†*Clava [vide etiam Clavus] costaricana, alajuela*, spp. n., Miocene Costa Rica, OLSSON Bul. Amer. Pal. 39 pp. 144-145.

†*Clavatula (Perrona) birmanica* sp. n. var. *singuensis* var. n. Tertiary Burma VREDENBURG Rec. Geol. Surv. Ind. 51 p. 282.

Clavus [vide etiam *Clava*] with *C. oeneus*, *candidulus*, *costatus*, spp. n., Queensland, HEDLEY Rec. Austral. Mus. 13 pp. 254-257.

Columbarium, HEDLEY 285.

†*Columbarium*, HEDLEY, 285.

†*Conidae*, PILSBRY 473 p. 326.

Conus maculospira nom. n. for *C. planiliratus* Sow. Pilsbry Proc. Acad. Nat. Sci. Philad. 73 p. 307.

†*Conus bocapanensis*, *berryi*, *cacuminatus*, *molis* var. *bravo*, spp. & var. n., Tertiary Peru, SPIEKER Johns Hopkins Univ. Stud. Geol. 3 pp. 38-41.—*C. pseudomarginatus* nom. n. for *C. marginatus* Cossm.—*C. haytensis politispira*, *proteus humerosus*, subspp. n., Tertiary Santo Domingo, PILSBRY Proc. Acad. Nat. Sci., Philad. 73 pp. 307, 327, 332.—*C.* with *C. veatchi*, *floridanus* var. *costaricensis*, *C. limonensis*, *musaensis*, *toroensis*, *planiliratus* var. *bocasensis*, *C. harrisi*, spp. & var. n., Miocene Costa Rica, OLSSON Bul. Amer. Pal. 39 pp. 42-54.—*C.*, LAVILLE 363.

†*Cylthara terminata* var. *costaricensis*, *C. limata* var. & sp. n. Miocene Costa Rica, OLSSON Bul. Amer. Pal. 39 p. 77.

Daphnella with *D. cestrum*, *cheverti*, *granata*, *sigmastoma*, spp. n., Queensland, HEDLEY Rec. Austral. Mus. 13 pp. 324-330.

†*Daphnella*, HEDLEY 285.

Daphnellopsis with *D. murex* sp. n. Queensland, HEDLEY Rec. Austral. Mus. 13 p. 356.

†*Drillia glabriuscula* sp. n. Pleistocene Japan, YOKOYAMA J. Coll. Sci. Tokyo 44 p. 40.—*D.* with *D. papaya*, *coccus*, *chiriquiensis*, *citria*, *aquanica*, *limonica*, *bocataroensis*, *theobroma*, *aurantia*, *muscina*, *estrellana*, *limonetta*, *carruca*, *limonensis*, *cristobali*, *bocasensis*, *aquensis*, *musa*, *lithocolletoides*, *cocosina* spp. n., Miocene Costa Rica, OLSSON Bul. Amer. Pal. 39 pp. 61-75.—*D. winchesterae*, *macilenta rectaxis*, *gatumensis alia* sp. & subspp. n., Tertiary Santo Domingo, PILSBRY Proc. Acad. Nat. Sci. Philad. 73 pp. 318-319.—*D.* (*Crassispira*) *kamaensis*, *cotteri*, spp. n., Tertiary Burma, VREDENBURG Rec. Geol. Surv. Ind. 51 p. 283.—*D.* (*Tripia*) *cureti*, *dumasi*, spp. n. Eocene France, COSSMANN Bul. Soc. Sci. Nat. Nantes 5 pp. 59-60.

†*Eopleurotoma nigeriensis* sp. n. Eocene Nigeria, NEWTON Geol. Surv. Nigeria 3 p. 23.

Epidreira with *E. gabensis* Victoria; *E. torquata* Tasmania, spp. n., HEDLEY Rec. Austral. Mus. 13 pp. 228-231.

Etrema with *E. acricula*, *capillata*, *catapasta*, *culmea*, *curtisiana*, *elegans*, *firma*, *labiosa*, *orirufa*, *polyderma*, *ravella*, *tortilabia*, Queensland; *E. sparula* S. Australia, spp. n., HEDLEY Rec. Austral. Mus. 13 pp. 272-285.

Eucithara with *E. alacris*, *arenivaga*, *brocha*, *monochoria*, *moraria*, *miriamica*, *phyllidis*, spp. n., Queensland, HEDLEY Rec. Austral. Mus. 13 pp. 260-272.

Eucyclotoma with *E. nobilis* sp. n. Coral Sea, HEDLEY Rec. Austral. Mus. 13 pp. 354-356.

Exomilus, HEDLEY 285.

Filodrillia gen. n. [*Turridae*] with *F. columnaria*, *ornata*, Tasmania; *F. mucronata*, *stadialis*, *steira* New S. Wales, spp. n., HEDLEY Rec. Austral. Mus. 13 pp. 220-225.

†*Filodrillia*, HEDLEY 285.

Gemmula with *G. hombroni* nom. n. for *Pleurotoma fusca*, HEDLEY Rec. Austral. Mus. 13 pp. 217-218.

†*Gemmula*, HEDLEY 285.

†*Genotia pseudopannus*, *ogurana*, spp. n., Pleistocene Japan, YOKOYAMA J. Coll. Sci. Tokyo 44 pp. 37-38.

†*Glyphostoma moinica* sp. n. Miocene Costa Rica, OLSSON Bul. Amer. Pal. 39 p. 76.

Guraleus with *G. costatus* New S. Wales; *G. c.* var. *wilesianus* S. Australia; *G. fascinus* and var. *stephennensis*, *G. morologus*, *permutatus* New S. Wales; *G. nitidus* S. Australia, spp. & var. n. HEDLEY Rec. Austral. Mus. 13 pp. 311-323.

†*Hemiconus rhytidophorus* sp. n. Eocene France, COSSMANN Bul. Soc. Sci. Nat. Nantes 5 p. 67.

Hemidaphne, HEDLEY 285.

Hemilienardia with *H. hersilia*, *homochroa*, spp. n., Queensland, HEDLEY Rec. Austral. Mus. 13 pp. 294-297.

†*Hemilienardia*, HEDLEY 285.

Heterocithara gen. n. with *H. concinna*, *erismata*, *seriliola*, *transenna*, spp. n., Queensland, HEDLEY Rec. Austral. Mus. 13 pp. 297-300.

†*Heterocithara*, HEDLEY 285.

Inquisitor with *I. coriorudis*, *laceratus*, *petilinus* New S. Wales; *I. fibratus*, *flindersianus*, *formidabilis*, *granobalteus*, *lassulus* Queensland, spp. n., *I. spurius* nom. mut. for *Pleurotoma tuberculata* Gray 1839, HEDLEY Rec. Austral. Mus. 13 pp. 236-247.

Iredalea, HEDLEY 285.

Leiocithara gen. n. [Turridae], HEDLEY Rec. Austral. Mus. 13 p. 268.

Leucosyrinx, HEDLEY 285.

†*Leucosyrinx chloris* sp. n. Miocene Costa Rica, OLSSON Bul. Amer. Pal. 39 p. 59.

Lienardia with *L. falsaria* New Caledonia; *L. corticea*, *fallaciosa*, *farsilis*, *gracilis*, *multinoda*, *periscelina*, *punctilla*, *ralla*, *rosella* Queensland, spp. n. HEDLEY Rec. Austral. Mus. 13 pp. 282, 285-294.

Macleota with *M. segesta* Chenue var. n. *cinctura* Queensland, HEDLEY Rec. Austral. Mus. 13 pp. 323-324.

†*Mangilia fukuchiana*, *M. (Cythara) rugosolabiata*, *oyuana*, spp. n., Pleistocene Japan, YOKOYAMA J. Coll. Sci. Tokio 44 pp. 42-43.—*M. (Glyphostoma) augsanana* sp. n. Java sp. n. Tertiary, MARTIN Samml. Geol. Reichsmus. 1 p. 450.

Marita subgen. n. [Turridae], HEDLEY Rec. Austral. Mus. 13 p. 312.

Melutoma dampieria W. Australia; *M. duplaris* Queensland; *M. eburnea*, *spadicina* New S. Wales; *M. lygdina* Victoria, spp. n., HEDLEY Rec. Austral. Mus. 13 pp. 249-253.

Mitrihara gen. n. [Turridae] with *M. columnaria* Tasmania; *M. proles* New S. Wales, HEDLEY Rec. Austral. Mus. 13 pp. 233-236.

†*Mitrihara*, HEDLEY 285.

Nepotilla with *N. tropicalis* sp. n. Queensland, HEDLEY Rec. Austral. Mus. 13 pp. 335-338.

Paraclathurella with *P. aditicola*, *clothonis*, spp. n., Queensland, HEDLEY Rec. Austral. Mus. 13 pp. 305-306.

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†*Parviterebra raritans* sp. n. Pleistocene Japan, YOKOYAMA J. Coll. Sci. Tokyo 44 p. 36.

†*Peratotoma ozocolpa* nom. rect. (*P. ozocolpa*) Eocene France, COSSMANN Bul. Soc. Sci. Nat. Nantes 5 p. 64.

†*Pleurotoma otagoensis* sp. n. Cretaceous N. Zealand, WILCKENS Pal. Bul. Geol. Surv. N.Z. 9 p. 35.—*P. (Eupleurotoma) dalimieri* sp. n. Eocene France, COSSMANN Bul. Soc. Sci. Nat. Nantes 5 p. 58.

Pseudodaphnella with *P. attenuata*, *canistra*, *harenula*, *oligoina*, *punicea*, *retellaria*, *stipata* Queensland; *P. mayana* Tasmania, spp. n., HEDLEY Rec. Austral. Mus. 13 pp. 344-354.

Pseudorhaphitoma with *P. axicula*, *bipyramidata*, *crudelis*, *styracina*, *transitans* Queensland; *P. informis* New S. Wales, spp. n., HEDLEY Rec. Austral. Mus. 13 pp. 306-311.

Scrinium gen. n. with *S. furtivum* sp. n. New S. Wales, HEDLEY Rec. Austral. Mus. 13 pp. 358-260.

Splendrilla subgen. n. [Turridae], HEDLEY Rec. Austral. Mus. 13 p. 250.

†*Surcula africana* sp. n. Eocene Nigeria, NEWTON Geol. Surv. Nigeria 3 p. 22.—*S. aretasi* sp. n. Eocene Belgium LÉRICHE Bul. Soc. Géol. Belge: 31 p. 183.—*S. occidentalis*, *thompsoni*, spp. n., Quaternary Peru, Woods in BOWORTH Geol. of Peru 1922 pp. 106-107.—*S. promensis* and var. *silistrensis* sp. & var. n. Tertiary India, VREDENBURG Rec. Geol. Surv. Ind. 51 pp. 304-308.—*S. (Pleurofusua) scala* sp. n. Tertiary Burma, VREDENBURG Rec. Geol. Surv. Ind. 51 p. 282.

Teleochilus, HEDLEY 285.†*Teleochilus*, HEDLEY 285.

†*Terebra augsanana* sp. n. Java Tertiary, MARTIN Samml. Geol. Reichsmus 1 p. 447.—*T. chibana*, *smithi*, *quadriarata*, *latisulcata*, *sua-vidica*, *tsuboiana*, spp. n., Pleistocene Japan, YOKOYAMA J. Coll. Sci. Tokyo 44 pp. 32-35.—*T. dalabeensis*, *T. (Duplicaria) theobaldi*, *cotteri*, *woodwardiana*, Mart. var. *mindegyiensis*, *myaunguensis*, *T. (Subula) cossmanni*, *T. (Myurella) promensis*, *birmanica*, *kyudawonensis*, *martini*, *hornelli*, *euglyptica*, *tipperi*, *myuros*, Lk. var. *obeliscus*, *T. (M.) oldhami*, inter-

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media, *T.* (*Hastula hrasei*, *lepperi*, *sethuramae*, *calamaria*, *pectinata*, *pagoda*, *mayoi*, *tittabweensis*, *iravadica*, *stuarti*, *herklotsi*, Mart. var. *arundinea*, spp. & varr. n. Tertiary Burma VREDENBURG Rec. Geol. Surv. Ind. 51 pp. 346-351. —*T. gausapata* var. n. *herviderana* Tertiary Peru, SPIEKER Johns Hopkins Univ. Stud. Geol. 3 p. 35. —*T. spirifera*, Dall. var. *midensis*, *T. estrellana*, *costaricensis*, *T. benthalis*, Dall. var. *bocasensis*, *T. pumbriensis*, spp. & varr. n., Miocene Costa Rica, OLSSON Bul. Amer. Pal. 39 pp. 39-41. —*T. (Subula) noellingi*, *T. (Myurella) quettensis*, spp. n., Tertiary Burma VREDENBURG Rec. Geol. Surv. Ind. 51 p. 281.

†*Terebridae*, PILSBRY 473 p. 315.

Turricula, HEDLEY 285.

†*Turricula lavinoides* & var. *limonensis*, *T. taurina*, *terryi*, spp. & var. n., Miocene Costa Rica, OLSSON Bul. Amer. Pal. 39 pp. 55-57. —*T.*, HEDLEY 285.

Turridrupa gen. n. [*Turridae*] with *T. deceptrix*, *pertinax*, spp. n., Queensland, HEDLEY Rec. Austral. Mus. 13 pp. 226-228, 359.

Turris, HEDLEY 285.

†*Turris conspicua*, *altispira*, spp. n., Tertiary Tasmania, MAY Papers and Proc. R. Soc. Tasmania 1921 pp. 11-12. —*T.*, HEDLEY 285.

†*Turritidae*, PILSBRY 473 p. 316.

Vepracula with *V. scala*, *vacillata* and var. *paucicostata*, spp. & var. n., Queensland, HEDLEY Rec. Austral. Mus. 13 pp. 330-331.

VOLUTIDAE, OLIVIDAE, MARGINELLIDAE, HARPIDAE.

†*Ancilla hinomotoensis* sp. n. Pleistocene Japan, YOKOYAMA J. Coll. Sci. Tokyo 44 p. 48. —*A. (Sparella) birmanica* sp. n. Tertiary Burma, VREDENBURG Rec. Geol. Surv. Ind. 51 p. 286.

†*Ancillaria aquaensis* sp. n. Miocene Costa Rica, OLSSON Bul. Amer. Pal. 39 p. 94.

†*Athleta lugardi* sp. n. Eocene Nigeria, NEWTON Geol. Surv. Nigeria 3 p. 25. —*A. (Volutospina) jacobsi* sp. n. Tertiary Burma, VREDENBURG Rec. Geol. Surv. Ind. 51 p. 286.

†*Cryptospira (Gibberula) allixi* sp. n. Eocene France, COSSMANN Bul. Soc. Sci. Nat. Nantes 5 p. 69.

†*Harpa americana* sp. n. Tertiary Santo Domingo, PILSBRY Proc. Acad. Nat. Sci. Philad. 73 p. 337.

Marginella goubini, *hervieri*, *montrouzieri* New Caledonian waters; *M. (Volvaria) micros* Pacific; *M. cherubini* Seychelles spp. n., BAVAY J. conchliol. Paris 67 pp. 60-64.

†*Marginella augsanana* sp. n. Tertiary MARTIN Samml. Geol. Reichsmus 1 p. 452. —*M. atkinsoni*, *corpulenta*, *subquinguidens*, *rotunda*, *altispira* spp. n. Tertiary Tasmania, MAY Papers and Proc. R. Soc. Tasmania 1921 pp. 9-16. —*M. cotamago*, *perovulum*, spp. n., Pleistocene Japan, YOKOYAMA J. Coll. Sci. Tokyo 44 p. 49. —*M. latissima* var. *pilsbryi*, *M. collina*, *musacina* var. & spp. n. Miocene Costa Rica, OLSSON Bul. Amer. Pal. 39 pp. 96-98. —*M. kitsoni* sp. n. Tertiary Victoria, CHAPMAN Rec. Geol. Surv. Victoria 4 p. 321. —*M. (Stazziana) chantegraini* sp. n. Eocene France, COSSMANN Bul. Soc. Sci. Nat. Nantes 5 p. 68.

†*Marginellidae*, PILSBRY 473 p. 337.

†*Oliva testacea*, Lk. var. *costaricensis*, *O. mancinella* var. & sp. n. Miocene Costa Rica, OLSSON Bul. Amer. Pal. 39 pp. 90-91.

†*Olivancillaria eocenica* Quaternary; *O. (Agaronia) peruviana* Tertiary, spp. n., WOODS in BOSWORTH Geol. of Peru 1922 pp. 105-106.

†*Olivella goliath*, *limonensis* and var. *bocasensis*, spp. & var. n., Miocene Costa Rica, OLSSON Bul. Amer. Pal. 39 pp. 92-94. —*O. minbuensis* sp. n. Tertiary Burma, VREDENBURG Rec. Geol. Surv. Ind. 51 p. 286. —*O. spretoides* sp. n. Pleistocene Japan, YOKOYAMA J. Coll. Sci. Tokyo 44 p. 47.

†*Olividae*, PILSBRY 473 p. 334.

Pseudomarginella, COOKE 134.

†*Scaphella costaricana*, sp. n. Miocene Costa Rica, OLSSON Bul. Amer. Pal. 39 p. 100.

Voluta, CIRIA 119.

†*Voluta (Aulica) sexuplicata* sp. n. Tertiary, CHAPMAN Proc. R. Soc. Vict. 35 p. 15.

Volutidae, COOKE 135.

†*Volutidae*, PILSBRY 473 p. 338.

†*Volutospina conicoturrita*, *multispinosa*, spp. n. Eocene Nigeria, NEWTON Geol. Surv. Nigeria 3 pp. 27-28.

INCERTAE SEDIS.

†*Amphelissa* gen. n., ETHERIDGE Rec. Geol. Surv. N.S.W. 10 pp. 1-11.

†*Encyclus pacificus* sp. n. Trias S. America, JAWORSKI N. Jahrb. Min. Stuttgart Beil. Bd. 47 p. 140.

†*Eutritonium* with *E. (Sassia) pilula*, *gouetense* var. *semitextum*, spp. n., Eocene France, CROSMANN Bul. Soc. Sci. Nat. Nantes 5 pp. 84-88.

†*Lapparentia* ? *ventricosior* sp. n. Eocene France, CROSMANN Bul. Soc. Sci. Nat. Nantes 5 p. 118.

†*Polyamma axinoides* [? sp. n.] Devon. N. S. Wales, ETHERIDGE Rec. Geol. Surv. N.S.W. 10 pp. 1-11.

†*Pseudoscalites subarmatus* sp. n. Trias S. America, JAWORSKI N. Jahrb. Min. Stuttgart Beil. Bd. p. 143.

†*Scalitina montana* subgen. & sp. n. Devon. Germany, SPIESTERSBACH Jahrb. Geol. Landesanst. 38 T.1. pp. 508-509.

Opisthobranchia.

Acanthodoris, O'DONOGHUE 440 & 441 p. 164.—A., O'DONOGHUE & O'DONOGHUE 443.

†*Acera* with *A. barremiensis* sp. n. Barremian France, GILLET Bul. Soc. Geol. Paris 21 p. 40.

Aceridae, ODHNER 438 p. 4.

†*Actaeon costaricensis* sp. n. Miocene Costa Rica, OLSSON Bul. Amer. Pal. 39 p. 35.

†*Actaeonella spitensis* sp. n. Senonian Sinai, HOPPE Zs. D. Palästina-Ver. 1922 p. 137.

Actaeonidae, ODHNER 438 p. 2.

†*Actaeonina transatlantica*, *ovata*, spp. n. Lias Argentina, BEHRENDSEN Act. Acad. Ci. Cordoba 7 p. 168.

†*Acteocina bullata*, Kien. var. n. *costaricana* Miocene Costa Rica, OLSSON

Bul. Amer. Pal. 39 p. 35.—A., DALL 166.—A., STRONG 585.

†*Acteocinidae*, PILSBRY 473 p. 310.

†*Acteonidae*, PILSBRY 473 p. 310.

Aeolidia collaris sp. n. Masatierra, ODHNER Nat. hist. of Juan Fernandez 3 2 p. 224 figs.—A., O'DONOGHUE 439, 440 & 441 p. 165.—A., O'DONOGHUE & O'DONOGHUE 443.

Aeolididae with *Cuthonia distans*, *Coryphella borealis*, spp. n., Norway, ODHNER Nyt. Mag. Naturv. Kristiania 60 pp. 28-34.

†*Akeridae*, PILSBRY 473 p. 313.

Amphorina with *A. columbiana* sp. n. Vancouver Isd. region, O'DONOGHUE Trans. Canad. Inst. 14 p. 160.

Anisodoris, O'DONOGHUE 440 & 441 p. 163.

Aplysia punctata, S. 530.

Archidoris, O'DONOGHUE 440 & 441 p. 163.—A., O'DONOGHUE & O'DONOGHUE 443.—A., SCOTT 548.

†*Avellanopsis* gen. n., RICHE & ROMAN Trav. Lab. géol. Lyon 1 p. 94.

†*Bullariidae*, PILSBRY 473 p. 313.

Bullidae, CHRISTENSEN 117 pp. 98-101.

†*Bulinella (Cylichnina) umbilicata* var. *subelongata* nom. mut. for *Bulla elongata*, Eichw., GRIPP Zs. D. geol. Ges. Abh. Berlin 74 p. 191.

†*Bulla multiarata* sp. n. Pleistocene Japan, YOKOYAMA J. Coll. Sci. Tokyo 44 p. 29.

Cadlina, O'DONOGHUE 441 p. 164.—C., O'DONOGHUE & O'DONOGHUE 443.

Calma glaucoides, EVANS 202.

Cavolina (= *Hermisenda*) *crassicornis*, Esch., O'DONOGHUE 442.—C., O'DONOGHUE 439.

†*Cavolinia cerullii*, *zamboninii* [? spp. n.] Miocene Italy, CHECCHIA-RISPOLI Bol. Com. geol. Roma 43 2 pp. 24-26.

Chioraera, O'DONOGHUE 440 & 441 p. 165.—C., O'DONOGHUE & O'DONOGHUE 443.

†*Cinulia washitaensis* sp. n. Cretaceous U.S.A., ADKINS Univ. Texas Bul. 1856 p. 143.—C., BEHRENDSEN 49 p. 212.

†*Olio distefanoi, aichinoi, saccoi* [*? spp. n.*] Miocene Italy, CHECCHIA-RISPOLI Bol. Com. geol. Roma 48 2 pp. 20-22.

Conularia mediorhenana sp. n. Devon. Germany, FUCHS Abh. geol. Landesanst. 79 p. 70.

†*Conularia*, DYER 196a.

Coryphella with *C. longicaudata* sp. n. Vancouver Isd. region, O'DONOGHUE Trans. Canad. Inst. 14 p. 156.—*C.*, O'DONOGHUE 440.

†*Creseis gaghiana* sp. n. Tertiary, GRIPP Zs. D. geol. Ges. Abb. Berlin 74 p. 192.

Cuthona, O'DONOGHUE 441 p. 161.

†*Cuvierina paronai* [*? sp. n.*] Miocene Italy, CHECCHIA-RISPOLI Bol. Com. Geol. Roma 48 2 p. 6.

†*Cylichna thomsoniana* sp. n. Cretaceous N. Zealand, WILCKENS Pal. Bul. Geol. Surv. N.Z. 9 p. 24.

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Dendronotus, KJERSCHOW-AGERS-BORG 345.—*D.*, O'DONOGHUE 440 & 441 p. 164.—*D.*, SCOTT 548.

Diaphanidae, ODHNER 438 p. 3.

Diaulula, O'DONOGHUE 440 & 441 p. 163.—*D.*, O'DONOGHUE & O'DONOGHUE 443.

Dirona, O'DONOGHUE 440 & 441 p. 164.—*D.*, O'DONOGHUE & O'DONOGHUE 443.

Discodoris, O'DONOGHUE 441 p. 151.

†*Dolabella (Sabaziella) texturata* sp. n. Pliocene Italy, ISSEL Atti soc. lig. Genova 1 p. 123.

Dorididae, ODHNER 438 p. 22.

Doris with *D. echinata* sp. n. Vancouver Isd. region, O'DONOGHUE Trans. Canad. Inst. 14 p. 149.

Doriopsidae, O'DONOGHUE 439.

Dotonidae with *Doto*, anatomy of, ODHNER 438 pp. 34-45.

Elysia, ODHNER 438 p. 45.

†*Eriptycha punamutica* sp. n. Cretaceous N. Zealand, WILCKENS Pal. Bul. Geol. Surv. N.Z. 9 p. 23.

Fiona, O'DONOGHUE 439.

Flabellina, O'DONOGHUE 439.

Galvina with *G. olivacea* sp. n.. Vancouver Isd. region, O'DONOGHUE Trans. Canad. Inst. 14 p. 158.—*G.*, O'DONOGHUE & O'DONOGHUE 443.

Goniaeolididae with *Goniaeolis typica* ODHNER 438 p. 10.

Goniodorididae, ODHNER 438 p. 25.

Haminea, RICHARDS 514.

Hermisenda, O'DONOGHUE 440 & 441 p. 165.—*H.*, O'DONOGHUE & O'DONOGHUE 443.

Janolus, O'DONOGHUE 439.

Juanella gen. n. (Fam. *Cadlinidae*.) *sparsa* sp. n. Masatierra, ODHNER Nat. hist. of Juan Fernandez 3 2 p. 225 figs.

Laila, O'DONOGHUE 441 p. 164.—*L.*, O'DONOGHUE & O'DONOGHUE 443.

Lamellidoris, O'DONOGHUE 440.—*L.*, O'DONOGHUE & O'DONOGHUE 443.

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†*Limacinidae*, PILSBRY 473 p. 308.

Limapontia, ODHNER 438 p. 45.

Melibe leonina, KJERSCHOW-AGERS-BORG 344.—*M.*, O'DONOGHUE 439.

Nectophyllirhoe michaelsarsi fam. *Nectophyllirhoidae* nom. n. for *Dactylopus michaelsarsi* Bonnevie, HOFFMANN Zool. Anz. 54 p. 304.

†*Philine pygmaea, takatensis* sp. n. Pleistocene Japan, YOKOYAMA J. Coll. Sci. Tokyo 44 p. 28.

Philinidae, ODHNER 438 p. 4.

Pleurobranchidae, ODHNER 438 p. 6.

Pleurophyllidia, O'DONOGHUE 440.

Pleurophyllidiidae, ODHNER 438 p. 45.

Polycera, SCOTT 548.

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Pseudodorididae, ODHNER 438 p. 24.

†*Retusa sulcata* subsp. n. *fossilis* Tertiary Santo Domingo, PILSBRY Proc. Acad. Nat. Sci., Philad. 73 p. 311.

†*Ringiculidae*, PILSBRY 473 p. 331.

Rostanga, O'DONOGHUE 441 p. 152.

- Scaphandridae*, ODHNER 438 p. 3.
- †*Scaphandridae*, PILSBRY 473 p. 313.
- †*Solidula clathrata* sp. n. Pleistocene Japan, YOKOYAMA J. Coll. Sci. Tokyo 44 p. 23.
- Stiliger pica* sp. n. Chilka Lake, SEWELL & ANNANDALE Mem. Ind. Mus. 5 p. 700.—S., ODHNER 488 p. 45.
- †*Styliola lamberti* [? sp. n.] Miocene Italy, CHECCHIA-RISPOLI Bol. Com. Geol. Roma 48 2 p. 10.
- †*Talahabia dentifera* gen. & sp. n. Java sp. n. Tertiary, MARTIN Samml. geol. Reichsmus 1 p. 446.
- †*Tentaculites roemeri* sp. n. Devon. Germany, DAHMER Jahrb. geol. Landesanst. 37 T.1 p. 455.
- Tethys willcoxi*, SANFORD 534.
- Thecacera*, O'DONOGHUE 439.
- †*Tornatella*, BEHRENDSEN 49 p. 192.
- Tornatinidae*, ODHNER 438 p. 2.
- Triopha*, O'DONOGHUE 439 & 441 p. 164.
- Tritonia*, O'DONOGHUE 441 p. 148.
- Tritoniidae*, ODHNER 438 p. 6.
- †*Vaginella lapugyensis*, Kittl. var. n. *garganica* Miocene Italy, CHECCHIA-RISPOLI Bol. Com. geol. Roma 48 2 p. 13.
- †*Volvula acutaeformis* sp. n. Pleistocene Japan, YOKOYAMA J. Coll. Sci. Tokyo 44 p. 26.
- PULMONATA.
- ELLOBIIDÆ, SIPHONARIIDÆ, CHILINIDÆ, LIMNAEIDÆ, PLANORBIDÆ, ANCYLIDÆ, PHYSIDÆ.
- †*Adelinella* subgen. n. (*Radix*) Tertiary, WENZ Senckenbergiana Frankfurt a. M. 4 p. 5.
- Amphipeplea*, HERFS 288 p. 564.
- Ancylidae*, BAKER 36 p. 63.
- Ancylus* with *A. (Ferrissia) viola* sp. n. Manipur, ANNANDALE & PRASHAD Rec. Ind. Mus. 22 pp. 588-592.—A., DEGNER 172.—A., WEBER 636 p. 483.
- Auricula* with *A. limnaeiformis*, *percha*, spp. n., Sumatra, ANNANDALE in PRASHAD Rec. Ind. Mus. 22 pp. 467-468.
- Auriculastra acuta* sp. n. Portuguese S.E. Africa, CONNOLLY Ann. Mag. Nat. Hist. 10 p. 121.
- Bullinus*, ANNANDALE 16.—B., GERMAIN 237.
- †*Ellobium citharellaforme* nom. n. Tertiary, WENZ Senckenbergiana Frankfurt a. M. 4 p. 5.
- †*Galba (G.) halavatsi, gaudryi* nom. n. Tertiary, WENZ Senckenbergiana Frankfurt a. M. 4 p. 6.
- Gyraulus*, WENZ 644.
- †*Gyraulus multicingulatus* nom. n. for *Planorbis striatus*, Brus.; *G. secensis* nom. n. for *P. (G.) tenuistriatus*, Lör., WENZ Nachrbl. D. Malak. Ges. 1919 p. 74.—G., GEYER 241.
- Hippeutis junodi* sp. n. Portuguese S.E. Africa, CONNOLLY Ann. Mag. Nat. Hist. 10 p. 121.
- Indoplanorbis* gen. n. Type *Planorbis exustus*, ANNANDALE & PRASHAD Rec. Ind. Mus. 22 p. 578.
- Intha* gen. n. *Planorbinae* with *I. capitis* sp. n. Burma, ANNANDALE Rec. Ind. Mus. 24 pp. 361-362.
- Isidora shackoi*, CAWSTON 104 & 105.—I., DEGNER 172.
- Limnaeidae*, ANNANDALE 13 p. 133.
- Limnaea* [vide etiam *Lymnaea*] with *L. ovalior* sp. n. N.E. India, ANNANDALE & PRASHAD Rec. Ind. Mus. 22 pp. 565-576.—*L. glabra*, BOYCOTT 88.—*L. natalensis*, CAWSTON 104.—*L. ovata*, VAN HERWERDEN 613.—*L. pereger*, BOYCOTT 86.—*L. stagnalis*, CRAPPER 154.—*L. s.*, LAWSON 365.—*L. s.*, LUDFORD 376.—*L.*, GERMAIN 237 & 238.—*L.*, WEBER 636 p. 473.
- †*Limnaea navaroi* sp. n. Miocene Spain, GOMÉZ Mem. Com. Inv. Pal. Madrid 30 p. 118.
- Lymnaea* [vide etiam *Limnaea*] (*Galba*) *winnebagoensis*, Wisconsin; *minnetonkensis* Minesota, spp. n., BAKER Nautilus 35 pp. 22-24.
- Lymnaeidae*, BAKER 36 p. 65.
- †*Malexia pisolina nana* nom. n. Tertiary, WENZ Senckenbergiana Frankfurt a. M. 4 p. 7.
- Melampus pascus* sp. n. Easter Island, ODHNER Nat. hist. of Juan Fernandez 3 2 p. 249 fig.

†*Palaeoleuca* subgen. n. Genotype *Leuconia* (*P.*) *remiensis* (Boissy) Tertiary WENZ Senckenbergiana Frankfurt a. M. 4 p. 8.

Physa fontinalis, CRAPPER 153.—*P. heterostrophia*, COOPER 142.—*P.* ANNANDALE 16.

Physastra with *P. doopi* sp. n. Sumatra, PRASHAD Rec. Ind. Mus. 22 pp. 474-476.

Physidae, BAKER 36 p. 64.

Physopsis africana, CAWSTON 104 & 106.—*P.*, CAWSTON 105.—*P.*, GERMAIN 238.

Planorbidae, ANNANDALE 13 p. 134 and 15.—*P.*, BAKER 36 p. 64.

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†*Planorbis fischeri* nom. n. for *P. submarginatus* *P.* Fisch. WENZ Nachrbl. D. Malak. Ges. 1919 p. 74.—*P. (Anisus) coislinensis*, *P. (Segmentina) bureaui*, spp. n., Eocene France, COSSMANN Bul. soc. sci. nat. Nantes 5 p. 55.—*P. (Armiger) lluecai* sp. n. Miocene Spain, GOMÉZ Mem. Com. Inv. Pal. Madrid 30 p. 132.—*P.*, RAUTHER 501.

†*Pomarinula* subgen. n. Genotype *Marinula* (*P.*) *pfeifferi* (Desh.) Tertiary, WENZ Senckenbergiana Frankfurt a. M. 4 p. 8.

†*Radix* (*R.*) *pallaryi* nom. n. Tertiary, WENZ Senckenbergiana Frankfurt a. M. 4 p. 7.

SELENITIDÆ, ZONITIDÆ, LIMACIDÆ,
PHYLOMICIDÆ, ARIONIDÆ.

Aegophthalmus gen. n. HESSE Nachr. Bl. D. malak. Ges. 42 1910 p. 168 [Accidentally omitted from previous records.]

Agriolimax agrestis, ROBSON 523.—*A.*, LUTHER 377.—*A.*, PILSBRY 478.

Archaeozonites gen. n., SANDBERGER Land u. Süssw. Conch. Vorwelt 1875 p. 404. [Accidentally omitted from previous records.]

Arion, PILSBRY 478 & 480.

Ariophantinae subfam. [n. ?] *Zonitidae* BLANFORD & GODWIN-AUSTEN Fauna Brit. India Moll. *Testacellidae* and *Zonitidae* London 1908 p. 25.

Binneya gen. n., COOPER Proc. Calif. Acad. Nat. Sci. 3 1863 p. 62. [Accidentally omitted from previous records.]

Crystallus trolli sp. n. N. Italy, WAGNER Ann. Zool. Mus. Polon. Hist. Nat., Warsaw 1 p. 113.

Durgella concinna sp. n. Burma, BLANFORD & GODWIN-AUSTEN Fauna Brit. India Moll. *Testacellidae* and *Zonitidae* London 1908 p. 215.

Euconulus, BAKER 42.—*E.*, WATSON 635.

Guppya, BAKER 42.

Helicarion meruensis sp. n. Meru, D'AILLY Kgl. Schwed. Ak. Wiss. Stockholm 1910 p. 7.

Holkeion gen. [n.] *Zonitidae*, BLANFORD & GODWIN-AUSTEN Fauna Brit. India Moll. *Testacellidae* and *Zonitidae* London 1908 p. 239.

Hyalinia lucida, SHAW 553.—*H.* WATSON 635.

Kerkophorus perfragilis sp. n. N. Transvaal, CONNOLLY Proc. Malac. Soc. 15 p. 72.

Limax flavus var. *virescens*, ADAMS 2.—*L. maximus*, HOFFMANN 293 & 295.—*L. tenellus*, OLDHAM 445.—*L. t.* WATSON 634.—*L.*, PILSBRY 478 & 480.

Macrochlamyinae subfam. [n.] *Zonitidae*, BLANFORD & GODWIN-AUSTEN Fauna Brit. India Moll. *Testacellidae* and *Zonitidae* London 1908 p. 77.

Macrochlamys nicholitzii sp. n. Burma EHRMANN SitzBer. natf. Ges. 45-48 p. 2.

Martensia with *M. meruensis* sp. n. Meru, D'AILLY Kgl. Schwed. Ak. Wiss. Stockholm 1910 p. 13.

Microcystina, BOETTGER 65.

†*Macrozonites* subgen. n. Genotype *Grandipatula*, (*M.*) *umbilicalis* (Desh.) Tertiary, WENZ Nachr. Bl. D. Malak. Ges. 1919 p. 77.

Milax (= *Amalia*) *gagates*, CARTER 102.

Nesonanina gen. n., C. R. BOETTGER Abh. Senckenb. Nat. Ges. 36 heft 3 1918 p. 288 [Accidentally omitted from previous records].

Oxychilus FITZ. WATSON 635.

†*Palaeozestina* gen. n. Genotype *P. oclusa*, (EDWARDS) Tertiary, WENZ Nachrbl. D. Malak. Ges. 1919 p. 77.

Paraegopsis gen. n., HESSE Nachr. Bl. D. malak. Ges. 42 1910 p. 168 [Accidentally omitted from previous records].

Parvatella gen. n. *Zonitidae*, BLANFORD & GODWIN-AUSTEN Fauna Brit. India Moll. *Testacellidae* & *Zonitidae* London 1908 p. 145.

Petasina, BERRY 56.—*P.*, WATSON 635.

Polita, PILSBRY 474.—*P.*, WATSON 635.

†*Provitrina* subgen. n. Genotype *Vitrina* (*P.*) *rillyensis* (BOISSY) Tertiary WENZ Nachrbl. D. Malak. Ges. 1919 p. 78.

Sakiella gen. [n.] *Zonitidae*, BLANFORD & GODWIN-AUSTEN Fauna Brit. India Moll. *Testacellidae* & *Zonitidae* London 1908 p. 237.

Sarama gen. [n.] *Zonitidae*, BLANFORD & GODWIN-AUSTEN Fauna Brit. India Moll. *Testacellidae* & *Zonitidae* London 1908 p. 275.

Satiella gen. [n.] *Zonitidae* with *S. flexilis*, *compressa*, *pertenuis*, spp. n., India, BLANFORD & GODWIN-AUSTEN Fauna Brit. India Moll. *Testacellidae* & *Zonitidae* London 1908 pp. 221-224.

Sesara bidentifera sp. [n. ?] Burma, BLANFORD & GODWIN-AUSTEN Fauna Brit. Ind. Moll. *Testacellidae* & *Zonitidae* London 1908 p. 245.

Sitala diaphana sp. n. Portuguese S.E. Africa, CONNOLLY Ann. Mag. Nat. Hist. 10 p. 116.—*S. vulcania* sp. n. India, BLANFORD & GODWIN-AUSTEN Fauna Brit. India Moll. *Testacellidae* & *Zonitidae* London 1908 p. 228.

Sophina forabilis var [n. ?] *bensoni* Burma, BLANFORD & GODWIN-AUSTEN Fauna Brit. India Moll. *Testacellidae* & *Zonitidae* London 1908 p. 289.

Sophininae subfam. [n.] *Zonitidae* BLANFORD & GODWIN-AUSTEN Fauna Brit. India Moll. *Testacellidae* & *Zonitidae* London 1908 p. 283.

Syama subgen. [n.] *Zonitidae* with *S. prona* var. [n. ?] *huttoni*, *S. annandalei* [sp. n. ?] & *S. ? theobaldi* sp. n. India, BLANFORD & GODWIN-AUSTEN Fauna Brit. India Moll. *Testacellidae* & *Zonitidae* London 1908 pp. 152-157.

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Trochomorpha (*Videna*) *planorbis perspectivica* subsp. n. Malay Archipelago, BOETTGER Abh. Senckenb. Naturf. Ges. 35 p. 372.

Trochonanina membranacea sp. n. Kilimandjaro, D'AILLY Kgl. Schwed. Ak. Wiss. Stockholm 1910 p. 14.—*T.*, GERMAIN 238.

Trochozonites with *T. meruensis* sp. n. Meru D'AILLY Kgl. Schwed. Ak. Wiss. Stockholm 1910 p. 12.

†*Vitrea subrimatula* sp. n. Miocene, WENZ Senckenbergiana, Frankfurt a. M. 3 p. 26.

Vitrina with *V. kiboschoensis*, *ericinellae*, *viridisplendens*, spp. n., Kilimandjaro, D'AILLY Kgl. Schwed. Ak. Wiss. Stockholm 1910 pp. 8-9.—*V. major*, BOYCOTT 85.

Xesta, BOETTGER 65.

Zonitidae, KOBELT 347.

Zonitoides cookei sp. n. Vancouver Isd., PILSBRY Nautilus 35 p. 38.—*Z. (Pseudohyalina)*, BAKER 42.

HELICIDÆ.

Acanthinula, with *A. lamellata* var. *albida* var. n. Sweden, SUNDLER J. Conch. Leeds 16 p. 185.

Aegista plectropyloides sp. n. Burma. EHRMANN Sitz. Ber. natf. Ges. 45-48 p. 14.

Albersia, BOETTGER 65.

†*Ammonitella*, HANNA 278 p. 4.

Archelix with *A. travensis* sp. n. Algeria, KOBELT in Rossmässler's Icon. 20 pp. 19-24, 31-55.

Assyriella gen. n., HESSE Zool. Jahrb. Syst. 27 1908 p. 319 [Accidentally omitted from previous records].

Austrochloritis with *A. rouxi* sp. n. Malay Archipelago, BOETTGER Abh. Senckenb. Naturf. Ges. 35 pp. 379-381.

Averellia with *Miraverellia* subgen. n. Type *A. sumichrasti* Cr. & F., BAKER Ann. Arbor Mich. occ. pprs. Mus. zool. No. 106 pp. 57-60.

†*Bulinus gerundensis*, VIDAL 618.

Callina, COCKERELL 121.

Candidula, Kob., WATSON 635.

Capillifera gen. n. HONIGMANN Abh. Mus. Naturk. Magdeburg Bd. 1 heft. 3 1906 p. 190 [Accidentally omitted from previous records].

†*Cepaea lepida* nom. n. for *Helix pachystoma*, Klein; *C. gottsckicki* nom. n. for *H. sylvestrina*, Zieten, WENZ Nachrbl. D. Malak. Ges. 1919 p. 70.

Chloritis, BOETTGER 65.

Cochlogena, PILSBRY 475.

Cochlohydra, PILSBRY 475.

Crystallopsis, BOETTGER 65.

†*Cyrtochilus*, WENZ 646a p. 71.

Deserticola gen. n., HESSE Rossmässler's Iconographie Land u. Süßsw. Moll. N.F. 16 1910 p. 95. [Accidentally omitted from previous records.]

Dorcasia, DEGNER 172.

Eobania gen. n. (*Helicidae*), KOBELT in Rossmässler's Icon. 23 p. 25.

Epiglypta gen. n., PILSBRY 1893 in Tryon's Man. Conch. ser. 2 viii p. 133. [Omitted from previous records].

†*Epiphragmophora*, HANNA 278 p. 9.

Eulota (*E.*) *euomphala* sp. n. Burma, EHSMANN Sitzber. natf. Ges. 45-48 p. 12.—*E.*, BOETTGER 65.

Euparypha with *E. pisana* mut. *taylori* nom. n. (*H. p. s. v. donatii* Taylor) Madeira, COCKERELL Nautilus 35 p. 45.

†*Gastrodonta imperforata* sp. n. Miocene Oregon, HANNA Sci. Bul. Univ. Kansas 13 p. 5.

Gonyodiscus, BERRY 56.

Gyrostoma gen. n., HESSE zool. Jahrb. Syst. 27 1908 p. 320. [Accidentally omitted from previous records.]

Gyrostomella gen. n. HESSE Rossmässler's Iconographic Land u. Süßsw. Moll. N.F. 16 1911 p. 113. [Accidentally omitted from previous records.]

Helicella heripensis, STELFOX 572.—*H. (C.) ventricosa*, VERCO 616.—*H.*, BERRY 56.—*H.*, PILSBRY 474.—*H.*, WATSON 635.

Helicidae, KOBELT 347.—*H.*, TAYLOR 589 & 591.

†*Helicodonta* (*Caracollina*) *disciformis* nom. n. for *Helix (Tectula) nummulina* Mayer-Eymar emend. Sandberger 1874 WENZ Nachrbl. D. Malak. Ges. 1919 p. 72.

Helicogena, PILSBRY 475.

Helicopsis Fitz, WATSON 635.

Helix with *H. sjöstedti*, *alticola*, Kilimandjaro; *H. alienus*, *H. (Phasis) meruensis*, Meru, spp. n., D'Ailly Kgl. Schwed. Ak. Wiss. Stockholm 1910 pp. 13-17.—*H. (christophi* var.?) *atrolabioides* sp. n.; *H. gyrostoma* var. n. *quedenfeldti* Tripoli, KOBELT in Rossmässler's Icon. 20 pp. 25, 54.—*H. aspersa* var. *exalbida*, BACCHUS 31.—*H. a.*, JARRETT 316.—*H. depressiformis* and *H. prostrata*, PILSBRY & COOKE 483.—*H. hortensis* var. *arenicola*, HUGGINS 300.—*H. h.* LAWSON 364.—*H. nemoralis* and *H. hortensis*, ALKINS 4.—*H. n.* and *H. h.*, CARTWRIGHT 103.—*H. n.*, GJAJA 251.—*H. oregonensis*, HANNA 279.—*H. pisana*, DUTERTRE 195.—*H. p.* MOUTIER 423.—*H. pomatia*, LIND 370.—*H. p.* ROCHLING 526.—*H.*, CAZIOT 108.—*H.*, GERMAIN 237.—*H.*, KORSCHOLT 349.—*H.*, TEN CATE 593.

†*Helix bolivari*, *pradoi*, *vilanovai*, *H. (Patula) supracostata*, spp. n., Miocene Spain, GOMÉZ Mem. Com. Inv. Pal. Madrid 30 pp. 139-144.—*H. (Vallonia) pulchella*, DE BOLÓS 170.

Hemphillia gen. n., BLAND & BINNEY Ann. Lyc. Nat. Hist N.Y. 10 1872 p. 208 [Accidentally omitted from previous records].

Hygromia limbata with *H. l.* var. n. *ecarinata* England, HUGGINS J. Conch. Leeds 16 pp. 297-301.—*H. fusca*, BACCHUS 33.—*H.*, WATSON 635.

†*Lemniscia calva* race. n. *veterna* Madeira, COCKERELL Nautilus 35 p. 46.

Leptaxis with *L. chrysomela* var. *bifasciata*, furva var. *grandissima* varr. n. Nautilus 35 pp. 101-103.

Liburnica gen. n., KOBELT Rossmässler's Iconographie Land u. Süßsw. Moll. N.F. 11 1904 pp. 74, 131 [Accidentally omitted from previous records].

Martha with *M. cereoflava podolica* subsp. n. Poland, POLIŃSKI Ann. Zool. Mus. Polon. Hist. Nat. Warsaw 1 pp. 167-182.

Metafruticicola gen. n., IHERING Zeits. Wiss. Zool. 54 1892 pl. 452 [Omitted from previous records].

Ochthephila (*Tectula*) *bulverii* mut. n. *albescens*, *O. (Discula) atrita* mut. n. *nigra*, *O. (D.) a. contracta* race. n., *O. (Callina) rotula* mut. n. *grisea* Madeira COCKERELL Nautilus 35 p. 45.—*O.* COCKERELL 121.

†*Ochthephila* (*Callina*) *crassiuscula* sp. n. Pleistocene Madeira Isds., COCKERELL J. Conch. Leeds 16 p. 310.

Omphalosagda gen. n. SANDBERGER Land u. Süßsw. Conch. Vorwelt 1875 p. 405 [Accidentally omitted from previous records].

Oreohelix with *O. strigosa canadica* subsp. n. Canadian Rockies, BERRY Mus. Bul. Ottawa 36 (Biol. ser. 8) pp. 4-6.

Pachyphallus sec. n. (*Helicidae*), KOBELT in Rossmässler's Icon. 23 p. 168.

Papuina, BOETTGER 65.

†*Patula whitei* nom. n. for *Helix* (*P.*) *sepulta*, White, WENZ Nachrbl. D. Malak. Ges. 1919 p. 74.

Planispira, BOETTGER 65.

Plectopylis (*P.*) *goniobathmos* sp. n. Burma, EHRMANN SitzBer. natf. Ges. 45-48 p. 10.

Plectotropis subangulata sp. n. Burma, EHRMANN SitzBer. natf. Ges. 45-48 p. 15.

†*Pleurodiscus* subgen. n. Genotype *Gonyodiscus* (*P.*) *balmei* (*P.* and Mich) Tertiary, WENZ Nachrbl. D. Malak. Ges. 1919 p. 78.

Polygyra germana vancouverinsulae subsp. n. Vancouver, PILSBRY & COOKE Nautilus 35 p. 38.—*P. multilineata algonquinensis*, BAKER 38.—*P.*, BERRY 56.

†*Polygyra* with *P. expansa, martini*, spp. n., Miocene Oregon, HANNA Sci. Bul. Univ. Kansas 13 pp. 7-8.

Punctum depressum, conicum, spp. n., Masatierra, ODHNER Nat. hist of Juan Fernandez 3 2 p. 227 figs.—*P. pallidum* sp. n. Portuguese S.E. Africa, CONNOLLY Ann. Mag. Nat. Hist. 10 p. 119.—*P.*, BERRY 56.

†*Pyramidula mascallensis* sp. n. Miocene Oregon, HANNA Sci. Bul. Univ. Kansas 13 p. 6.

Rhododerma sec. n. (*Helicidae*), KOBELT in Rossmässler's Icon. 23 p. 154.

Sculptaria with *S. damarensis* (H. Ad.) var. *minor*, *S. leschkei* sp. & var. n. S.W. Africa, DEGNER Beitr. Kennt. L. Süßwasserfauna D. S.W. Afrikas Hamburg 1922 pp. 4-8.

Strobilops, HANNA 281.

Sulcobasis, BOETTGER 65.

Thiessea gen. n., KOBELT Rossmässler's Iconographie Land u. Süßsw. Moll. N.F. 11 1904 pp. 76, 187 [Accidentally omitted from previous records].

Thysanophora with *T. pilsbryi* sp. n. Mexico, BAKER Ann Arbor Mich. occ. pprs. mus. zool. No. 106 pp. 54-57.

Trichia, WATSON 635.

Trochoidea, BROWN, WATSON 635.

Trochula Sch., WATSON 635.

Tyrrhenaria subgen. n. (*Helicidae*), KOBELT in Rossmässler's Icon. 23 p. 121.

Vallonia costellata, HAAS 275.

†*Vallonia pallaryi* nom. n. for *V. subpulchella*, Pallary, WENZ Nachrbl. D. Malak. Ges. 1919 p. 75.

Vortex, OKEN, KENNARD & WOODWARD 332.

Wiegmannia gen. n., HESSE Nachr. Bl. D. malak. Ges. 48 1916 p. 124 [Accidentally omitted from previous records].

ENDODONTIDÆ.

Endodonta (*Charopa*) *involuta*, *masa-fueræ*, (*Thaumatodon*) *occulta*, *skottsbergi*, spp. n., Juan Fernandez, ODHNER Nat. hist. of Juan Fernandez 32 pp. 228, 229, 252 figs.

Nesophila, BOETTGER 65.

Trachycystis *ambigua*, *sericea*, *mcadow-elli*, *rudicostata*, *soror*, *pura*, *vengoensis*, spp. n., Portuguese S.E. Africa, CONNOLLY Ann. Mag. Nat. Hist. 10 pp. 116-118.—*T.* with *T. junodi*, *shilwaneensis*, *subpinguis*, spp. n., N. Transvaal, CONNOLLY Proc. Malac. Soc. 15 pp. 73-74.

ORTHALICIDÆ, BULIMULIDÆ,
CYLINDRELLIDÆ.

Liguus, SIMPSON 556.

†*Lychnus*, with *L. vitrolensis*, *aragonensis*, *dalloni*, *vidali*, *giganteus*, spp. n., Cretaceous France, REPELIN Mém. soc. géol. Paris 23 Mém. 53 pp. 5-24.

PUPIDÆ, STENOGYRIDÆ, HELICTERIDÆ.

Achatina with *A. pilsbryi*, Usambara; *A. retzii* Meru, spp. n., d'Ailly Kgl. Schwed. Ak. Wiss. Stockholm 1910 pp. 20-22.—*A.*, CONNOLLY 132.—*A.*, DEGNER 172.—*A.*, GERMAIN 238.

Achatinella *multizonata*, COOKE 136.

Alopiæ (*A.*) *julii* Siebenburgen; *A.* (*Herilla*) *pavlovici*, *trescavicensis*, *excedens* *pseudalopia*, *exornata*, *ziegleri* *ljubienicensis*, *illyrica* *plasensis*, *i. medoroides*, *dacica* *perfecta*, *accedens* *discreta*, *bosniensis* *gastron* Jugo-Slavia; *A.* (*Medora*) *almissana* *garganensis* Italy; *A.* (*M.*) *kutschigi* *cotorensis* Cattaro; *A.* (*M.*) *graciliformis* *prenjensis* Jugo-Slavia; *A.* (*Agathylla*) *regularis* *castellastuana* Cattaro., spp. & subspp. n., KOBELT in Rossmäesslers Icon. 21 pp. 33, 38-51 & 22 pp. 1-14.—*A.* with *A. deamiana* sp. n. Roumania, COOKE J. Conch. Leeds 16 pp. 302-306.—*A.*, WAGNER 630.

Amastrea *irwiniana*, *spaldingi*, *davisiana*, spp. n., Hawaiian Islands, COOKE Occ. pprs. Ber. P. Bishop Mus. Honolulu 3 pp. 213-215.—*A.* (*Laminella*) *kuhnsi* sp. n. Hawaiian Isds., COOKE Occ. pprs. Ber. P. Bishop Mus. Honolulu 3 p. 217.—[*A.* ?] *ricei* and var. *armillata* [*A.* ?] *juddii*, *thurstoni*, *gouveii*, *elephantina*,

modicella, *umbilicata* var. *pluscula*; *Amastrea* *remota*, *A. rugulosa* varr. *fastigata*, *annosa*, *A. flavescens* var. *emortua*, *A. whitei*, *conica* var. *gentilis*, *A. spicula*, *vinosa*, *fragosa*, *podogula*, *sericea* var. *anaglypta*, *A. montivaga*, *paulula*, *præopima*, *forbesi*, *hitchcocki*, *uniplicata* var. *vetuscula*, *A. mirabilis*, *flemingi*, spp. & varr. n., Hawaiian Isds. COOKE Occ. Paps. Ber. P. Bishop Mus. Honolulu 3 pp. 221-247.

Aprosphyma (*Polyptychophora*) *swinhoei* *demonstrata* subsp. n. Formosa, WAGNER Ann. zool. Mus. Polon. Hist. Nat. Warsaw 1 p. 104.

Balea *perversa*, ALKINS 4.

Buliminus with *B.* (*Cerastus*) *thèelli* sp. n. Meru and Kilimandjaro, d'Ailly Kgl. Schwed. Ak. Wiss. Stockholm 1910 p. 18.—*B.*, GERMAIN 237.

†*Buliminus* *hassiacus* nom. n. for *Bulimus* (*Petreus*) *turgidulus*, Sandb., WENZ Nachrbl. D. Malak. Ges. 1919 p. 69.

Caeciloides *spencei* sp. n. Belgian Congo, DUPUIS Ann. Soc. roy. zool. Belgique 53 pp. 47-48.

Clausilia (*Cristataria*) *germaini* Pal-lary sp. n. Syria GERMAIN Moll. ter. fluv. Syrie Paris 1922 p. 122.—*C. bidentata*, ALKINS 4.—*C.*, MARGIER 393.

†*Clausilia* *manca* nom. n. for *C. wetzleri* Mill., WENZ Nachrbl. D. Malak. Ges. 1919 p. 71.

Clausiliidae, KOBELT 347.—*C.*, WAGNER 631 & 632.

†*Cochlicopa* *milleri* nom. n. for *C. exigua* Mill., WENZ Nachrbl. D. Malak. Ges. 1919 p. 71.

Cochlodina, PILSBRY 475.

Columella, BERRY 56.

Curvella *subgradata* sp. n. Meru d'Ailly Kgl. Schwed. Ak. Wiss. Stockholm 1910 p. 27.

Edouardia *junodi* sp. n. Portuguese S.E. Africa, CONNOLLY Ann. Mag. Nat. Hist. 10 p. 120.—*Edouardia* with *E. mcbeaniana* subsp. n. *lemaneensis* N. Transvaal, CONNOLLY Proc. Malac. Soc. 15 pp. 74-75.

Ena with *E. (Eburnea) serica*, *robusta*, *nilens*, spp. n., S.W. Africa, DEGENER Beitr. Kennt. L. Süßwasserfauna D. S.W. Afrikas Hamburg 1922 pp. 18-30.—*E. jugoslaviensis* sp. n. S.E. Europe, WAGNER Ann. zool. Mus. Polon. Hist. Nat. Warsaw 1 p. 118.

Gastrocopta, BOETTGER 65.

†*Laminifera minutissima* sp. n. Miocene Germany, FISCHER Arch. Moll. Frankfurt 54 p. 103.

Lauria, CONNOLLY 132.

†*Lauria austriaca* sp. n. Miocene, WENZ Senckenbergiana Frankfurt a. M. 3 p. 28.—*L. gottschicki* sp. n. Miocene Germany, WENZ Arch. Moll. Frankfurt 54 p. 107.—*L.* with *L. bourbonensis* Isd. of Bourbon; *L. vineta watsoniana*, *L. sphinctostoma heterodon* and *simulator* Madeira, sp. & subspp. n., *Azoripupa* see n. PILSBRY Man. Conch. [27] pp. 43-128.—*L.*, PILSBRY 481.

Leptachatinae, COOKE 141 pp. 39-46.

Leptinaria charlottei nom. n. for *L. imperforata* F. Baker, BAKER Nautilus 35 p. 32.—*L. striosa*, GRENFELD 260.

Leucochiloides with *L. minusculus* (MOUSS.) var. n. *major* S.W. Africa, DEGENER Beitr. Kennt. L. Süßwasserfauna D. S.W. Afrikas Hamburg 1922 pp. 31-34.

†*Leucochylus edlaueri* sp. n. Miocene, WENZ Senckenbergiana, Frankfurt a. M. 3 p. 30.

Leucostigma gen. n. (*Clausiliidae*) WAGNER Nachr. Bl. D. Malak. Ges. Frankfurt a. M. 41 1919 p. 145.

Limicolaria, GERMAIN 238.—*L. [imicolaria]*, [ANON] 21.

Limicolarionopsis gen. n. with *L. sjöstedti* sp. n. Meru and Kilimandjaro, D'Ailly Kgl. Schwed. Ak. Wiss. Stockholm 1910 p. 24.

Lyropupa truncata sp. n. Hawaiian Isds., COOKE Occ. pprs. Ber. P. Bishop Mus. Honolulu 3 p. 211.

Nenia belahubbarði, *flachi tingamariae*, *bryantwalkeri*, spp. & subspp. n., Peru, PILSBRY Nautilus 35 pp. 93-95.—*N.*, POLINSKI 485.

Neosorbica gen. n. (*Clausiliidae*), WAGNER Nachr. Bl. D. Malak. Ges. Frankfurt a. M. 41 1919 p. 135.

Nesopupa bandulana sp. n. Portuguese S.E. Africa, CONNOLLY Ann. Mag. Nat. Hist. 10 p. 119.

Opeas varicosum, Meru, *O. tangaense* Usambara, spp. n., D'Ailly Kgl. Schwed. Ak. Wiss. Stockholm 1910 pp. 27-28.—*O. vengoense*, *cressyi*, spp. n., Portuguese E. Africa, CONNOLLY Ann. Mag. Nat. Hist. 10 p. 120.—*O.*, BOETTGER 65.

Orcula dolium tatrica subsp. n. Hungary, WAGNER Ann. zool. Mus. Polon. Hist. Nat., Warsaw 1 p. 121.—*O.* with *O. scyphus palatilis* Kurdistan; *O. s. crassa* Upper Euphrates; *O. s. graecus* Euboea, subspp. n., PILSBRY Man. Conch. [27] pp. 1-43.

†*Orcula*, PILSBRY 481 pp. 3-4.

Pacificella gen. n. (near *Tornatellina*), *variabilis* sp. n. Easter Island, ODHNER Nat. hist. of Juan Fernandez 3 p. 249 figs.

Partulina horneri (Bald.) var. n. *kapuana* Hawaiian Isds., GOUVEIA Occ. pprs. Ber. P. Bishop Mus. Honolulu 7 p. 53.

Peruvinia, POLINSKI 485.

Petriola alticola sp. n. Kilimandjaro, D'Ailly Kgl. Schwed. Ak. Wiss. Stockholm 1910 p. 27.

Protoherilla gen. n. *Alopiinae* with *P. janickii*, *balaciformis*, spp. n., S.E. Europe, WAGNER Ann. zool. Mus. Polon. Hist. Nat. Warsaw 1 pp. 42-45.

Pseudotrochus janssensii sp. n. Belgian Congo, DUPUIS & PUTZEYS Ann. Soc. roy. zool. Belgique 53 pp. 42-45.

Pupa with *P. etrusca* sp. n. & varr. n. *major*, *minor*, *porcellata* W., *obesa* Settep. Italy, CAZIOT Ann. soc. linn. Lyon 65 p. 99.

Pupilla fonlana, CONNOLLY 131.

Rachis CONNOLLY 132.

Rachisellus, GERMAIN 238.

Subulina sinistrorsa sp. n. Belgian Congo, DUPUIS Ann. Soc. roy. zool. Belgique 53 pp. 47-48.—*S.*, DEGENER 172.—*S.*, GERMAIN 238.

Tornatellina with *T. plicosa*, *callosa*, *aperta*, spp. n., Masatierra, ODHNER Nat. hist. of Juan Fernandez 3 pp. 237-238 figs.

Tornatellinidae, COOKE 141 pp. 47-54.

Vertigo, BERRY 56.—*V.*, MOROS 418.

OLEACINIDÆ, TESTACELLIDÆ.

Edentulina with *E. montium* sp. n. Kilimandjaro, D'AILLY Kgl. Schwed. Ak. Wiss. Stockholm 1910 pp. 4-5.

Ennea (*Gulella*) *meruensis*, Meru; *E. (G.) coarctata*, Kilimandjaro, spp. n., D'AILLY Kgl. Schwed. Ak. Wiss. Stockholm 1910 p. 6.—*E. iredalei*, Preston, CONNOLLY Ann. Mag. Nat. Hist. MAIN 238.

Gonaxis cressyi, *G. (Eustreptaxis) vengoensis*, spp. n., Portuguese S.E. Africa, CONNOLLY Ann. Mag. Nat. Hist. 10 pp. 113-114.

Gulella enneadon, praelonga, tristãoensis, spp. n., Portuguese S.E. Africa, CONNOLLY Ann. Mag. Nat. Hist. 10 pp. 114-115.—*G.* with *G. bitzeensis* [Loc?]; *G. cancellata* and var. *minor*, *G. candela* and var. *minor*, *G. pisa, impedita, calva, filix, disseminata* subsp. *kekumegaensis*, Kenya; *G. (Paucidentina) dupuisi*, Belgian Congo; *G. (Plicigulella) salutationis*, Tanganyika; *G. (P.) perlata*, Kenya; *G. (Molarella) gwendolinae* subsp. *scissidens*, Tanganyika, spp., subsp. & varr. n., CONNOLLY Ann. Mag. Nat. Hist. 10 pp. 491-501.—*G.* with *G. sibasana* sp. n. N. Transvaal, CONNOLLY Proc. Malac. Soc. 15 pp. 70-72.—*G. (Molarella)* sec. n., CONNOLLY Ann. Mag. Nat. Hist. 10 pp. 500-501.

Marconia, CONNOLLY 131.

Orthogibbus, Germain = *Gonospira*, Swains, DUPUIS Ann. Soc. roy. zool. Belgique 53 pp. 46-47.

Ptychotrema fisheri, Uganda; *P. (Parennea) cedrorum* Kenya, spp. n., CONNOLLY Ann. Mag. Nat. Hist. 10 pp. 489-491.—*P. (Parennea) connollyi* sp. n. Belgian Congo, DUPUIS & PUTZEYS Ann. Soc. roy. zool. Belgique 53 pp. 40-42.

Streptaxinae subfam. [n.] *Testacellidae* BLANFORD & GODWIN-AUSTEN Fauna Brit. India Moll. *Testacellidae* & *Zonitidae* London 1908 p. 1.

Streptostele with *S. signata*, Camerun; *S. urguessensis, fallooni, kenyana, orbates, elongata*, Kenya; *S. validior, sinuiliabiata, elgonensis*, Uganda; *S. hasta, clavulus, crassicrenulata, patruelis nyiroensis, osculum, ordinaria, crassi-*

plicata, columna, Kenya; *S. (Raffraya) clara*, Camerun; *S. (R.) curvata*, Uganda; *S. (R.) auriformis*, Kenya; *S. (R.) cylindrica*, Uganda; *S. (R.) constricta*, Kenya; *S. (R.) unidentata*, N. Rhodesia; *S. (Graptostele) candelula*, Camerun; *S. (G.) iota, jod*, Kenya; *S. (Varicostele) curvicolumella*, Uganda, spp. n., CONNOLLY Ann. Mag. Nat. Hist. 10 pp. 501-516.

Tayloria with *T. shimbiensis* sp. n. Kenya, CONNOLLY Ann. Mag. Nat. Hist. 10 pp. 486-487.

†*Testacella larteti tagica* nom. n. Tertiary, WENZ Senckenbergiana Frankfurt a. M. 4 p. 7.

SUCCINEIDÆ.

Succinea with *S. elegantior* sp. n. Manipur, ANNANDALE Rec. Ind. Mus. 22 pp. 592-602.—*S. texta, masafueræ*, spp. n., Juan Fernandez, ODHNER Nat. hist. of Juan Fernandez 3 pp. 245, 253 figs.—*S. oblonga*, TAYLOR 390.—*S.*, BERRY 56.—*S.*, DEGNER 172.

VERONICELLIDÆ, ONCIDIIDÆ.

Onchidium, AREY & CROZIER 23.—*O.*, HIRASAKA 290.

Vaginula roccatii [sp. n.] Uganda, COLOSI Monitore zool. ital., 32 p. 125.—*V.* with *V. borelliana, robusta, festae, pulchra, propinqua, lugubris, americana, difficilis, erinacea, morii, absumpta, attenuata, laurentiana, esilicaulis*, spp. n., S. America, COLOSI Ann. Mus. Hist. Nat. Buenos Aires 31 pp. 475-517.

Scaphopoda.

†*Dentaliidae*, PILSBRY 473, p. 399.

†*Dentalium augsanum* sp. n. Tertiary, MARTIN Samml. geol. Reichsmus. 1 p. 479.—*D. bocasensis, uscarianum*, spp. n., Miocene Costa Rica, OLSSON Bul. Amer. Pal. 39 p. 166.—*D. (Fustiaria) nipponicum* sp. n. Pleistocene Japan, YOKOYAMA J. Coll. Sci. Tokyo 44 p. 119.—*D. (Laevidentalium) morgani* sp. n. Cretaceous N. Zealand, WILCKENS Pal. Bul. Geol. Surv. N.Z. 9 p. 24.

†*Plagioglypta prosseri* sp. n. Carbon U.S.A., MORNINGSTAR Geol. Surv. Ohio 25 p. 245.

†*Siphodentaliidae*, PILSBRY 473 p. 400.

Pelecypoda or Lamellibranchia.

GENERAL.

†*Lamellibranchia*, GILLET 247.

PROTOBRANCHIA.

(Includes *Solenomyidae*, *Nuculidae*, *Ledidae*, *Ctenodontidae*, *Praecardiidae*, *Grammysiidae*, etc.)†*Cardiomorpha beushauseni* sp. n. Devon Germany, FUCHS Abh. geol. Landesanst. 79 p. 58.†*Ctenodonta decukmanni*, *biornata*, *tenuidens*, spp. n., Devon, Germany, SPIRIESTERSBACH Abh. geol. Landesanst. 80 pp. 43-47.—*C. eifeliensis*, sp. n. Devon Germany, VIETOR Jahrb. geol. Landesanst. 37 2 p. 402.—*C. solenoides* sp. n. Devon Germany, SPIRIESTERSBACH Jahrb. geol. Landesanst. 38 T. 1 p. 463.—*C. (Koenenia) obsoleta* var. n. *giengelsbergensis* Devon, Germany, DAHMER Jahrb. geol. Landesanst. 40 T. 2 p. 247.†*Cucullella circularis*, *semicircularis*, *decipiens* and var. *aequalis*, spp. & var. n. Devon Germany, FUCHS Abh. geol. Landesanst. 79 pp. 45-47.†*Grammysia frontesulcata*, *subtilistria*, *cullmanni*, spp. n., *G. abbreviata*, Sandb. nom. mut. *postera* Devon Germany, SPIRIESTERSBACH Jahrb. geol. Landesanst. 38 T. 1 pp. 481-486.—*G. teres* sp. n. Devon Germany, SPIRIESTERSBACH Abh. geol. Landesanst. 80 p. 78.†*Leda davila*, *quitanensis*, *ensinoides*, *dalliana*, spp. n., Miocene Costa Rica, OLSSON Bul. Amer. Pal. 39 pp. 173-175.—*L. ingens* sp. n. Quaternary Peru, Woods in Bosworth Geol. of Peru 1922 p. 61.—*L. prolongata* sp. n. Carbon, U.S.A., MORNINGSTAR Geol. Surv. Ohio 25 p. 206.—*L.* with *L. oxyrhynca* sp. n. Trias S. America, JAWORSKI N. Jahrb. Min. Stuttgart Beil. Bd. 47 pp. 113-115.—*L.*, BEHRENDSEN 49 p. 173.†*Ledidae*, PILSBRY 473 p. 402.†*Nucula costaeimbricatus* sp. n. Eocene Nigeria, NEWTON Geol. Surv. Nigeria 3 p. 73.—*N. elongata* sp. n. Carbon U.S.A., MORNINGSTAR Geol. Surv. Ohio 25 p. 201.—*N. lieseri*, Spr. var. n. *similis* Devon Germany, SPIRIESTERSBACH Abh. geol. Landesanst. 80 p. 40.—*N. nokonis*, *wenoensis*, spp. n., Cretaceous U.S.A., ADKINS Univ. TexasBul. 1856 pp. 118-120.—*N. orbicella*, *cahuilensis* sp. n. Miocene Costa Rica, OLSSON Bul. Amer. Pal. 39 p. 171.—*N.* with *N. rozieri* sp. n. Eocene, COSSMANN Mém. soc. géol. Paris 23 & 24 Mém. 55 pp. 128-130.†*Nuculana rhomboidea* sp. n. Tertiary Tasmania, MAY Papers and Proc. R. Soc. Tasmania 1921 p. 12.—*N. robustella*, *carinata*, spp. n., Devon Germany, SPIRIESTERSBACH Abh. geol. Landesanst. 80 pp. 41-42.—*N. securiformis*, Goldf. var. n. *directa* Devon Germany, FUCHS Abh. geol. Landesanst. 79 p. 47.†*Nuculidae*, PILSBRY 473 p. 401.†*Solenomya* ?? *sharonensis* sp. n. Carbon U.S.A., MORNINGSTAR Geol. Surv. Ohio 25 p. 194.†*Yoldia reaganii* nom. n. for *Y. impressa* (Conrad) Reagan, DALL Amer. J. Sci. 4 p. 306.—*Y. prima* sp. n. Eocene, COSSMANN Mém. soc. géol. Paris 23 & 24 Mém. 55 p. 130.—*Y. bocasensis* [? sp. n.] Miocene Costa Rica, OLSSON Bul. Amer. Pal. 39 p. 176.

FILIBRANCHIA.

ANOMIACEA.

Anomia ephippium, MOLTONI 413.—*A.*, WINCKWORTH 651.†*Anomia berryi* sp. n. Tertiary Peru SPIEKER Johns Hopkins Univ. Stud. Geol. 3 p. 127.—*A. lunula*, *sematana*, spp. n., Pleistocene Japan, YOKOYAMA J. Coll. Sci. Tokyo 44 p. 177.—*A.* with *A. oligocaenica* sp. n. Eocene, COSSMANN Mém. soc. géol., Paris 23 & 24 Mém. 55 pp. 215-216.—*A. talahabensis* sp. n., Tertiary, MARTIN Samml. geol. Reichsmus 1 p. 481.—*A.* with *A. (?) koeneni* sp. n. Jura Argentina Act. Acad. Ci. Cordoba 7 pp. 177, 195.†*Anomiidae*, PILSBRY 473 p. 409.

ARCAEAE.

†*Anadara nigeriensis* sp. n. Eocene Nigeria, NEWTON Geol. Surv. Nigeria 3 p. 70.*Arca lithodomus*, Sow, MAURY 400.—*A.*, MAURY 402.—*A.*, NORDGÅRD 434 p. 13.†*Arca (Noetia) cholena*, *A. (Cunearca) zorritensis*, *A. (Scapharca) pantheonensis*, *zapotalensis*, *fissicosta*, *singewaldi*, s. var. *doma*, *vanholsti*, *charanensis*, *imporcata*,

crecens, *A. (Anadara) nelsoni*, *toroensis* t. var. *crassa*, t. var. *prolata*, spp. & varr. n., Tertiary Peru, SPIEKER Johns Hopkins Univ. Stud. Geol. 3 pp. 95-125. — *A. mauryae*, *costaricensis*, *honensis*, *golfoyaquensis* Maury var. *medioamericana*, *A. veatchi*, *cacica*, *lloydi*, *hindsii*, spp. n., Miocene Costa Rica, OLSSON Bul. Amer. Pal. 39 pp. 182-193. — *A. washitaensis* sp. n. Cretaceous U.S.A., ADKINS Univ. Texas Bul. 1856 p. 121. — *A.*, BEHRENDSEN 49 p. 195. — *A.*, SHANNON 552 p. 249. — *A.* with *A. (Parallelepipedum) forojuliensis* sp. n. Oligocene Italy, LOMBARDINI Riv. Ital. Palaeont. 26 pp. 24-25.

† *Arcidae*, PILSBRY 473 p. 403.

† *Axinaea augsanana* sp. n. Tertiary, MARTIN Samml. geol. Reichsmus 1 p. 484.

Barbatia with *B. (Calloarca) tuamotana* nom. n. for *Byssarca decussata*, Sow., MAURY Pal. Amer. Ithaca 1 pp. 173-175, 178.

† *Barbatia* with *B. lesbarritzensis*, *sacyi*, *cauderanensis*, *gaasensis*, *B. (Acar) rhombicula*, *B. (Obliquarca) perplanata*, spp. n., Eocene, COSSMANN Mém. soc. géol. Paris 23 & 24 Mém. 55 pp. 141-147.

Calloarca reveana varr. n. *velatiformis*, *lasperlensis* Panama Bay, MAURY Pal. Amer. Ithaca 1 p. 177.

† *Cucullaea subconcinna* sp. n. Lias Germany, SCHNITTMANN Zs. D. geol. Ges. Berlin 74 p. 21. — *C.*, BEHRENDSEN 49 p. 172.

† *Cucullaria orientalis* sp. n. Pleistocene Japan, YOKOYAMA J. Coll. Sci. Tokyo 44 p. 191.

† *Cyrtodonta kayseri*, Frech var. *elongata*, *C. rhenana*, *rhensensis* var. & spp. n., Devon. Germany, VIETOR Jahrb. geol. Landesanst. 37 2 pp. 383-386.

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†*Lucinoma musculata* sp. n. Eocene, COSSMANN Mém. soc. géol. Paris 23 & 24 Mém. 55 p. 99.

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†*Pisidium ezquerrai, macphersoni*, spp. n., Miocene, Spain, GÓMEZ Mem. Com. Inv. Pal. Madrid 30 pp. 154–155.

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†*Semele laevis*, Sow. var. n. *costaricensis* Miocene Costa Rica, OLSSON Bul. Amer. Pal. 39 p. 258.

†*Strigilla musanica* sp. n. Miocene Costa Rica, OLSSON Bul. Amer. Pal. 39 p. 255.

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†*Galilaeanus crucifer* sp. n., BUCKMAN Type Amm. pt. 32 pl. cccxiii.

†*Galilaeceras trichophorum* sp. n. Proplanulitan, BUCKMAN Type Amm. pt. 32 pl. cccxi.

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†*Gonionotites* with *G. schuberti*, *irmintrudis*, *noricus*, *halaritiformis*, spp. n., *G. Heinrichites* subgen. n. with *G. (H.) paulcketi*, *grobbenii*, *furlaniae*, *waageni*, spp. n., Trias Austria, DIENER Denkschr. Ak. Wiss. Wien 97 pp. 490-499.

†*Gowericeras* gen. n. *G. metorchum* sp. n., BUCKMAN Type Amm. pt. 29 p. 54 & pl. ccliv; *G. ventrale* sp. n. BUCKMAN op. cit. pt. 32 pl. cclxxxviii; *G. planus* sp. n., BUCKMAN op. cit. pt. 37 pl. cclxxxvii.*

†*Griesbachites* with *G. densicostatus* *waltharii*, *cornutus*, *goetzingeri*, spp. n. Trias Austria, DIENER Denkschr. Ak. Wiss. Wien 97 pp. 473-477.

†*Gyroceras halangense* sp. n. Devon Indo-China, MANSUY Mém. serv. géol. Indochine 8 p. 21.

†*Halilucites ornatus*, Hauer var. n. *penthesileiae* Trias, RENZ Verh. Natf. Ges. 33 p. 250.

†*Hammatoceras cappucinum* sp. n. Yeovilian, BUCKMAN Type Amm. pt. 26 pls. ccvi A B.

†*Hamulina worthensis* sp. n. Cretaceous U.S.A., ADKINS Univ. Texas Bul. 1856 p. 7.—H., GIGNOUX 244.

†*Hamulisphinctes hamulatus, auricula* spp. n. Callovian, BUCKMAN Type Amm. pt. 30 pls. cclxii A B & cclxiii.

†*Haploceras falculationum* sp. n. Jura Argentina, STEUER Act. Acad. Ci. Cordoba 7 p. 104.—H., BEHRENDSEN 49 d. 180.

Haptochlaena gen. n. with *H. chuni* sp. n., GRIMPE SitzBer. natf. Ges. 45–48 p. 41.

†*Harpoceras bodenbenderi* sp. n. Jura Argentina, STEUER Act. Acad. Ci. Cordoba 7 p. 106.—H., BEHRENDSEN 49 p. 205.—H., CRICK 155 p. 286.

†*Hecticoceras* with *H. bonyi, thirriai*, spp. n. Jura, France, PETITCLERC Descriptions de quelques formes nouvelles d'Ammonites, &c. Vesoul 1921 pp. 7–8 10–11 467.—H. with *H. garreti* sp. n. Jura France, PETITCLERC Note sur plusieurs espèces d'Ammonites &c. Vesoul 1918 pp. 7 21–22 468.—*H. lunula* var. n. *trifurcata* Jurassic, LEMOINE Bul. soc. hist. nat. Chambéry 19 pp. 143–146.

†*Helicoceras*, SPATH 562 p. 149.

Heteroleuthis, NAEF 427 Bd. I pls. viii xix.

†*Hildaites subserpentinus* sp. n. Whitbian, BUCKMAN Type Amm. pt. 26 pl. ccxvii; *H. serpentiniformis*, BUCKMAN op. cit. pt. 30 p. 55.

†*Hildoceras* with *H. sublevisoni* sp. n. Lias Italy, FUCINI Pal. ital. Pisa 25 pp. 181 183.

†*Hildoceratoides propeserpentinus* sp. n. Whitbian, BUCKMAN Type Amm. pt. 26 pl. ccxviii.

Histioteuthis, NAEF 427 Bd. I pls. iii xv xvii; Bd. II pl. viii.—H., DEGNER 173.

†*Hlaliceras platyrrimum* sp. n. Bajocian, BUCKMAN Type Amm. pt. 28 pl. ccxi.

†*Holcodiscoides* gen. n., SPATH Trans. R. Soc. S. Af. 10 p. 124.

†*Holcodiscus* with *H. seunesiformis* sp. n. Cretaceous Italy, RODIGHIERO Pal. Ital. Pisa 25 pp. 99–101.

†*Holcostephanus* with *H. (Astieria) bodenbenderi, depressus*, spp. n., Jura Argentina, STEUER Act. Acad. Ci. Cordoba 7 p. 94.

†*Homerites* with *H. heinrichii* sp. n. Trias Austria, DIENER Denkschr. Ak. Wiss. Wien 97 pp. 465–466.

†*Homoeoplautites homoeomorphus* sp. n., BUCKMAN Type Amm. pt. 35 pl. ccxxviii.

†*Hoplites* with *H. mendozanus, protractus, calistoides* Jura; *H. with H. angulatiformis, neumayri* Cretaceous, spp. n., Argentina, BEHRENDSEN Act. Acad. Ci. 7 pp. 181–185 210–211.—*H. with H. subvetustus, quadripartitus*, spp. n., Jura Argentina, STEUER Act. Acad. Ci. Cordoba 7 pp. 85–89.—*H. (Dalmasiceras) spiticeroides, subspiticeroides, punctatum*, Jurassic, France; *H. kiliani, crassicostatum*, Cretaceous, France, spp. n., DJANÉLIDZÉ Bul. soc. geol. Paris 21 pp. 256–274.—*H.*, FRANKE 214.

†*Horticeras sidericum* sp. n., BUCKMAN Type Amm. pt. 32 pl. ccxvi.

†*Hypocladiscites*, DIENER 179 p. 371.

Idiosepiomorphae trib. n., GRIMPE SitzBer. natf. Ges. 45–48 p. 43.

Illex coindetii, CHADWICK 110.—*I.*, NAEF 427 Bd. I pls. xii xiv xvii.

†*Inflatoceras* gen. n., STIELER N. Jahrb. Min. 2 pp. 33–37.—*I.*, STIELER 582.

†*Joannites helenae, klipsteini*, Mojs. var. *aegaeica* sp. & var. n. Trias, RENZ Verh. Natf. Ges. 33 pp. 237 239.

†*Jovites*, DIENER 180 p. 466.

†*Juvavites* with *J. angulocostatus, bülowii, salinarius, ampfereri*, spp. n., Trias Austria, DIENER Denkschr. Ak. Wiss. Wien 97 pp. 468–472.

†*Kallitiloceras interlineatum* sp. n. Wessexian, BUCKMAN Type Amm. pt. 25 pls. cciv A B.

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- †*Kitchiniles* gen. n., SPATH Trans. R. Soc. S. Af. 10 p. 127.
- †*Kleistoxyites protusus* sp. n. Sonninian, BUCKMAN Type Amm. pt. 33 pl. ccclxvii.
- †*Kossmaticeras meseticum* sp. n. Cretaceous Argentine, BONARELLI & NÁGERA Bol. 27 Min. Ag. Dir. Gen. Minas Buenos Aires p. 27.
- †*Kranaosphinctes kranaus* sp. n. Argovian, BUCKMAN Type Amm. pt. 28 pls. cccliii A B.
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- Lampadioteuthinae* subfam. n., GRIMPE SitzBer. natf. Ges. 45-48 p. 46.
- †*Leptosphinctes coronarius* sp. n. Bajocian, BUCKMAN Type Amm. pt. 25 pl. ccii.
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- †*Leukadiella helenae* var. n. *ticinensis* Lias Switzerland, RENZ Ec. Geol. Helvet. 17 p. 152.
- †*Leveillia*, SHANNON 552 p. 249.
- †*Lobites*, DIENER 179.
- Loliginae* subfam. n., GRIMPE SitzBer. natf. Ges. 45-48 p. 44.
- Loligo*, NAEF 427 Bd. I pls. i ii xii xiv xvii; Bd. II pls. i vii.
- †*Lydistratites lyditicus* sp. n., BUCKMAN Type Amm. pt. 37 pls. cccliii A B.
- †*Lytoceras* with *L. liebigi*, Opp. mut. [? n.] *apliensis* Cretaceous France, FALLOT Mém. Carte Géol. Fr. 1920 pp. 230-232.—*L. parvulum* sp. n. Jura France, GROSSOUVRE Bul. soc. géol. Paris 21 p. 314.—*L. rangei* sp. n. Vraconian Sinai, HORFE Zs. D. Palästina-Ver. 1922 p. 142.—*L.*, GIGNOUX 244.—*L.*, STEUER 580 p. 105.
- †*Lytdiscoides* gen. n., SPATH Trans. R. Soc. S. Af. 10 p. 126.
- †*Macrocephalites verus* sp. n., BUCKMAN Type Amm. pt. 35 pls. ccclxxxiv A B.
- †*Macroscaphites*, FALLOT 205 p. 247.—*M.*, GIGNOUX 244.
- Macrotritopus*, GRIMPE SitzBer. natf. Ges. 45-48 p. 41.
- †*Madarites madarus*, *calvus*, *pravus* gen. & spp. n., BUCKMAN Type Amm. pt. 28 pp. 42 45-46.—*M. glabretus* sp. n. BUCKMAN op. cit. pt. 29 p. 52.
- †*Malayites* with *M. styriacus*, *steigert*, *antipatris*, spp. n., Trias Austria, DIENER Denkschr. Ak. Wiss. Wien 97 pp. 487-490.
- †*Manticoceras*, SHANNON 552 p. 251.
- †*Marathonites* subgen. n. with *M. Smithi*, *sulcatus*, *vidriensis*, ? *M. hargisi*, spp. n., Permo-Carbon., Texas, BÖSE Bul. Univ. Texas 1762 pp. 133-145.
- †*Margarites*, DIENER 180 p. 507.
- †*Medlicottia whitneyi*, *burckhardti*, spp. n., Permo-Carbon., Texas, BÖSE Bul. Univ. Texas 1762 pp. 72-81.
- †*Megaphyllites*, DIENER 179.
- †*Mennites* gen. n., SPATH Trans. R. Soc. S. Af. 10 p. 123.
- †*Merocanites* gen. n., SCHWINDEWOLF Senckenbergiana Frankfurt a. M. 4 p. 15.
- †*Metacanites* gen. n., SCHWINDEWOLF Senckenbergiana Frankfurt a. M. 4 p. 15.
- Metacephalopoda* subclass. n., GRIMPE SitzBer. natf. Ges. 45-48 p. 38.
- †*Metacoceras pottsvillensis* sp. n. Carbon. U.S.A., MORNINGSTAR Geol. Surv. Ohio 25 p. 269.
- †*Metasibirites* with *M. krumbeckii* sp. n. Trias Austria, DIENER Denkschr. Ak. Wiss. Wien 97 p. 510.
- †*Miltites josephi* sp. n. Trias Austria, DIENER Denkschr. Ak. Wiss. Wien 97 p. 510.
- †*Mollistephanus mollis* sp. n. Sonninian, BUCKMAN Type Amm. pt. 36 pl. ccclxiv.

†*Morrisiceras* [= *Morrisiceras*] with *M. korustes*, *tolmerum*, *homæoticum*, *comma*, *skipum* spp. n., BUCKMAN Type Amm. Pt. 28 pp. 47-48 Pt. 32 pl. cclxxxv

†*Morrisites fornicatus* gen. & sp. n., BUCKMAN Type Amm. 28 pp. 42 48.

†*Mortoniceras stangeri* (Baily) varr. n. *sparsicosta*, *densecosta* Cretaceous Ponderland, SPATH Trans. R. Soc. S. Af. 10 p. 138.—*M. worthenae* sp. n. Cretaceous U.S.A., ADKINS Univ. Texas Bul. 1856 p. 91.

†*Murleyiceras forte* sp. n. Whitbian, BUCKMAN Type Amm. pt. 29 pl. cclxv; *M. aptum* sp. n., BUCKMAN op. cit. pt. 34 pl. cccxvi.

†*Nannolytoceras subovale* sp. n., BUCKMAN Type Amm. pt. 34 pls. cccxxiv A B.

Nautilinae subfam. n., GRIMPE SitzBer. natf. Ges. 45-48 p. 38.

Nautiloidea, WOODWARD 656.

Nautilus, NAEF 427 Bd. I pl. xvi.

†*Nautilus* with *N. perstriatus* sp. n. Jura Argentina, STEUER Act. Acad. Ci. Cordoba 7 p. 107.—*N. rangei* sp. n. Vraconian Sinai, HOPPE Zs. D. Palästina-Ver. 1922 p. 144.

†*Neokentroceras* with *N. curvicornu*, *subtuberculatum*, *pseudovaricosum*, spp. n., Cretaceous Angola, SPATH Trans. R. Soc. Edinburgh 53 pp. 139-143.

†*Nevadites lissoni*, *sutanensis*, spp. n., Trias S. America, JAWORSKI N. Jahrb. Min. Stuttgart Beil. Bd. 47 pp. 159-165.

†*Nowakites* gen. n., SPATH Trans. R. Soc. S. Af. 10 p. 124.

†*Obtusicosites* gen. n., BUCKMAN Type Amm. pt. 27 p. 42.

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Octopodoteuthis sicula varr. n. *mediterranea*, *atlantica* European Seas, GRIMPE SitzBer. natf. Ges. 45-48 p. 46.

Octopus bimaculatus, PARKER 460.—*O. vulgaris*, MONTICELLI 414.—*O.*, CRAIFALEANU 152.—*O.*, NAEF 427 Bd. I pls. ix x xiii xvi xviii; Bd. II pl. xxiv.

Ocythoe, NAEF 427 Bd. I pls. xvi xviii; Bd. II pl. xxxvii.

†*Odontoceras* gen. n. with *O. anglicum*, Jura England; *O. transgrediens*, *beneckei*, *laxicosta*, *subcallisto*, *koeneni*, *intercostatum*, *fasciatum*, *subfasciatum*, *kayseri*, *tenerum*, *gracile*, *ellipsostomum*, *fallax*, *nodulosum*, *curvipleur*, *planum*, *ruripartitum*, *rotula*, *malarguense*, *permullicostatum* Jura, Argentina, spp. n., STEUER Act. Acad. Ci. Cordoba 7 pp. 65-85.

†*Œcostephanus dolichoecus* sp. n. Bajocian, BUCKMAN Type Amm. pt. 30 pl. cclxv.

†*Ōcostephanus*, BEHRENDSEN 49 p. 212.

Ommatostrephes, NAEF 427 Bd. I pls. v vi xii xiv xvii xix; Bd. II pls. ix-xii.—*O. todarus*, S. 531.

Ommatostrephina fam. n., GRIMPE SitzBer. natf. Ges. 45-48 p. 48.

†*Oncoceras*, REUEDEMANN 513a.

Onychoteuthis NAEF 427 Bd. I pls. iv xv xvii.

†*Oppelia* with *O. barbieri* sp. n. Jura France, PETITCLERO Note sur plusieurs espèces d'ammonites &c. Vesoul 1918 pp. 8 19 468.—*O. gerardi*, *mazetieri*, spp. n., Jura France, PETITCLERO Descriptions de quelques formes nouvelles d'ammonites &c. Vesoul 1921 pp. 4-5 467.—*O.* with *O. perlaevis*, *perglabra*, spp. n., Jura Argentina, STEUER Act. Acad. Ci. Cordoba 7 pp. 102-104.—*O.*, BEHRENDSEN 49 p. 203.

†*Orthoceras angustepartitum*, *patellifer*, *disparisectusum* and var. *decipiens*, *O. proceracella*, *hunsrückianum*, *biornatum*, *biannulatum*, spp. n., Devon Germany, FUCHS Abh. geol. Landesanst. 79 pp. 71-73.—*O. giengelsbergensis* sp. n. Devon Germany, DAHMER Jahrb. geol. Landesanst. 40 T. 2 p. 220.—*O.*, SHANNON 552 p. 250.—*O.*, REUEDEMANN 513a.

†*Oxynoticeras leptodiscus* sp. n. Lias Argentina, BEHRENDSEN Act. Acad. Ci. Cordoba 7 p. 167.

†*Pachammatoceras pachu* sp. n. Yeo-vilian, BUCKMAN Type Amm. pt. 26 pl. ccvii.

†*Pachydesmoceras* gen. n., SPATH Trans. R. Soc. S. Af. 10 p. 127.

†*Pachydiscoides* gen. n., SPATH Trans. R. Soc. S. Af. 10 p. 124.

- †*Pachydiscus*, BLONDET 64 p. 150.
- †*Pallarpiles pallus* sp. n., BUCKMAN Type Amm. pt. 37 pl. cclxxii A.
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- †*Paralegoceras incertum* sp. n. Permo-carbon. Texas, BÖSE Bul. Univ. Texas 1762 p. 100.
- †*Parapachydiscus zaccagnai* sp. n. Cretaceous Tripoli, FUCINI Mem. Descr. Carta Geol. Ital. 18 p. 120.
- †*Parapuzosia haughtoni* sp. n. Cretaceous Pondoland sp. n. Cretaceous Pondoland, SPATH Trans. R. Soc. S. Af. 10 p. 128.
- †*Paratropites* with *P. pirilneri*, *myronis*, spp. n., Trias Austria, DIENER Denkschr. Ak. Wiss. Wien 97 pp. 505-506.
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- †*Perisphinctes* with *P. kokeni*, *torquatus*, spp. n., Jura Argentina, BEHRENDSEN Act. Acad. Ci. Cordoba 7 pp. 186-191 209.—*P.* with *P. loncochensis*, *densistriatus*, *fasciculatus*, *noduliferus* spp. n., Jura Argentina, STEUER Act. Acad. Ci. Cordoba 7 pp. 90-93.—*P. persicus*, *stahli*, *morgani*, *peluricus*, spp. n., Persia, FISCHER Beitr. Pal. Geol. Ost.-Ung. 27 pp. 235-236 242, 245.—*P.* with *P. colardi*, *meyeri*, *poisoti*, *retrocostatus*, *revoli*, *rochei*, *zelleri*, spp. n., Jura, France, PETITCLERC Note sur plusieurs espèces d'ammonites &c. Vesoul 1918 pp. 10-18 20 22-25 468.—*P.*, PETITCLERC 467 pp. 12-15.
- †*Peronoceras* with *P. ? sparsinodum* sp. n. Lias Italy, FUCINI Pal. ital. Pisa 25 pp. 186-189.
- †*Perrinites* gen. n. with *P. vidriensis*, *compressus*, spp. n., Permo-carbon., Texas, BÖSE Bul. Univ. Texas 1762 pp. 155-168.
- †*Phanerosphinctes phanerus* sp. n. Eningenian, BUCKMAN Type Amm. pt. 26 pl. cexi.
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- †*Phylloceras hafisi*, *ferdusi*, spp. n., Persia, FISCHER Beitr. Pal. Geol. Ost. Ung. 27 pp. 227-228.—*P. homophyllum* sp. n. Jura Argentina, BEHRENDSEN Act. Acad. Ci. Cordoba 7 p. 202.—*P.* with *P. moriczenae*, *aptiensis kiliani*, spp. n., Cretaceous, France, SATY Mem. Carte Geol. Fr. 1920 pp. 192-200.—*P.*, DIENER 179 p. 375.—*P.*, GIGNOUX 243.
- †*Pictetia*, GIGNOUX 244.
- †*Pinacoceras*, DIENER 179 p. 383.
- †*Placites*, DIENER 179.
- †*Planammatoceras planiforme* sp. n., BUCKMAN Type Amm. pt. 37 p. 256.
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- †*Pleurophorites pleurophorus*, *polypleurus* gen. & spp. n., BUCKMAN Type Amm. pt. 28 pp. 42 46-47.
- Polypus*, BELCHER 51.

†*Polysphinctites polysphinctus* sp. n., BUCKMAN Type Amm. pt. 34 pls. cccxxii A B C; *P. repletus* sp. n., BUCKMAN op. cit. pt. 37 pl. ccclix.

†*Pompeckjites*, DIENER 179 p. 385.

†*Proarcestes irenae*, *arethusae*, *subtridentinus* var. *arteminae*, spp. & var. n., TRIAS, RENZ Verh. Natf. Ges. 33 pp. 230-234.—*P.* with *P. sublabiatiformis*, *kernerii*, *welleri*, spp. n., TRIAS, Austria, DIENER Denkschr. Ak. Wiss. Wien 97 pp. 359-362.

†*Prohysterocheras* with *P. decipiens*, *dubium*, spp. n., Cretaceous, Angola, SPATH Trans. R. Soc. Edinburgh 53 pp. 143-147.

†*Prolecanites quadratus* sp. n. Carbon. Germany, SCHWINDEWOLF Senckenbergiana Frankfurt a. M. 4 p. 15.

†*Proplanulites* with *P. majesticus*, *basileus*, *laevigatus*, *ferruginosus*, *curvus*, *opimus*, *torquatus*, *polonicus*, *occultus*, *latus*, *laboratus*, *fabricatus*, *involutus*, *lentus*, *apparatus*, *subcuneiformis*, *auriculatus*, *capistratus*, *rudis*, *oidaleus*, *stiphrus*, *petrosus*, *lyprus*, *tridens*, *trifurcatus*, *excentricus*, *partitus*, *rufus*, *fulvus*, *fracidus*, spp. n., BUCKMAN Type Amm. Pt. 26 pp. 33-40; *P. capularis* sp. n., BUCKMAN op. cit. Pt. 27 p. 41; *P. lobatus* sp. n., BUCKMAN op. cit. pt. 35 pl. cccxxx.

†*Proplanulitidae* fam. n., BUCKMAN Type Amm. pt. 25 p. 32.

†*Prorsisphinctes omphalicus* sp. n., BUCKMAN Type Amm. pt. 35 pl. cccxxvi.

†*Proteites thaleiae* sp. n. Trias, RENZ Verh. natf. Ges. 33 p. 247.

†*Prothalassoceras* gen. n. with *P. welleri* sp. n., Permo-carbon. Texas, BÖSE Bul. Univ. Texas 1762 pp. 102-106.

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†*Protrachyceras annamense* sp. n. Trias Indo-China, MANSUY Mém. serv. géol. Indochine 7 p. 22.

†*Pseudojacobites* gen. n., SPATH Trans. R. Soc. S. Af. 10 p. 121.

†*Pseudokossmaticeras* gen. n., SPATH Trans. R. Soc. S. Af. 10 p. 126.

†*Pseudoschloenbachia pseudofournieri* sp. n. Cretaceous Pondoland, SPATH Trans. R. Soc. S. Af. 10 p. 140.

†*Ptycharcestes heinrichi* sp. n. Trias Austria, DIENER Denkschr. Ak. Wiss. Wien 97 p. 363.

†*Ptychites* with *P. pauli* Mojs var. *moreana*, *P. plusiae*, *globus* Hauer var. *epidaurensis*, sp. & var. n. Trias, RENZ Verh. Natf. Ges. 33 pp. 224-229.—*P.*, CLAUS 120.

†*Ptychoceras*, SPATH 562 p. 150.

†*Puzosia* with *P. emerici*, Rasp. var. [? n.] *strigosa* sp. n. Cretaceous France, FALLOT Mem. Carte Geol. Fr. 1920 pp. 247-261.—*P. kossmati* sp. n. Vraconian Sinai, HOPPE Zs. D. Palästina-Ver. 1922 p. 140.—*P.*, SPATH 562 p. 153.

†*Reineckia* with *R. egregia*, *laticor argentina*, *mutata*, *grandis*, *steinmanni*, *turgida*, *pawlowi*, *mangaensis*, *proxima*, *fraudans*, *striolotissima*, *striolata*, *planulistria*, *incerta*, spp. n., Jura Argentina, STEUER Act. Acad. Ci. Cordoba 7 pp. 49-65.—*R. tilli* sp. n. Persia, FISCHER Beitr. Pal. Geol. Ost. Ung. 27 p. 231.—*R.*, PETTOLERO 468 p. 26.

†*Rhabdoceras curvatum* nom. n. for *R. suessi*, Hau. var. *curvatum*, Mojs., JAWORSKI N. Jahrb. Min. Stuttgart Beil. Bd. 47 p. 153.

Rhynchoteuthion, NAEF 427 Bd. I pl. vi.

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†*Rhytostephanus rhytus* sp. n. Bajocian, BUCKMAN Type Amm. pt. 29 pls. ccl A B.

Rossia, NAEF 427 Bd. I pls. xv xviii.

†*Rugiferites rugifer* gen. & sp. n., BUCKMAN Type Amm. pt. 28 pp. 42 46.

†*Sagenites*, DIENER 180 p. 499.

†*Sanmartinoceras palagonicum* gen. & sp. n. Cretaceous Argentina, BONARELLI & NÁGERA Bol. 27 Min. Ag. Dir. Gen. Buenos Aires p. 27.

†*Scaphites*, BLONDET 64 pp. 150-151.

†*Schistoceras smithi*, *diversecostatum*, spp. n., Permo-carbon., Texas, BÖSE Bul. Univ. Texas 1762 pp. 93-99.

†*Schloenbachia varians* varr. *ventriosa*, *nodulosa*, *costata* varr. n. Cretaceous, STIELER N. Jahrb. Min. 2 pp. 31-33.—*S. wenoensis*, *wintoni*, spp. n., Cretaceous, U.S.A., ADKINS Univ. Texas Bul. 1856 pp. 89-90.

†*Schlotheimia*, TRUEMAN 603 p. 281.

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†*Sigaloceras micans* sp. n. Callovian, BUCKMAN Type Amm. pt. 29 pl. cclv.

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†*Skolekostephanus skolex* sp. n. Bajocian, BUCKMAN Type Amm. pt. 29 pl. ccxlix.

†*Sonneratia*, BLONDET 64 pp. 148-149

†*Sphaeroceras tutthum* sp. n. Bajocian, BUCKMAN Type Amm. pt. 30 pl. ccviii.

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†*Stephanoceras* with *S. damesi* sp. n. Jura Argentina, STEUER Act. Acad. Ci. Cordoba 7 pp. 96-97.—*S.*, BEHRENDSEN 49 pp. 180 204.—*S.*, CRICK 155 p. 286.

†*Stepheoceras plagium* sp. n. Bajocian, BUCKMAN Type Amm. pt. 27 pl. ccxxxix.

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†*Suspensites suspensus* sp. n., BUCKMAN Type Amm. pt. 36 pl. ccexlvi.

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†*Zigzagites imitator* sp. n., BUCKMAN Type Amm. pt. 33 pl. ccc.

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IX. CRUSTACEA

ARRANGED BY

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X. ARACHNIDA

TO WHICH ARE ADDED

ARTHROPOD GROUPS

OTHER THAN

INSECTA AND CRUSTACEA.

[GIGANTOSTRACA (XIPHOSURA, EURYPTERIDA, TRILOBITA),
PANTOPODA, TARDIGRADA, PENTASTOMIDA, MYRIOPODA, AND
PROTOTRACHEATA.]

ARRANGED BY

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XI. INSECTA

BY

THE IMPERIAL BUREAU OF ENTOMOLOGY

(Assisted by N. D. RILEY and W. H. T. TAMs).

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DEGENER, *Hyponomeuta*, 694; DOBRZHANSKI, *Coccinellidae*, 734.

Symbiosis.

BUCHNER, in *Hemiptera*, 409; FRAENKEL, 986.

Social Habits.

LAMEERE, 1649; SCHROTTYK, 2499; TONNOIR, a Chironomid and a Blepharocerid larva, 2800.

Nests.

BALLES, *Pompilus fumipennis*, 118; BEQUAERT, *Polybioides*, 208; BERLAND, *Polistes gallicus*, 229; DAVIS, *Vespidæ*, 673; JÜNGEL, ants, 1477; LEPRI, *Odynerus*, 1693; LOMNICKI, ant, 1735; MALYSHEV, bees and wasps, 1832; PIERRE, *Odynerus*, 2260; PLATH, *Bombus*, 2265; STURMHÖFEL, *Perophoridae*, 2712; TURNER, *Odynerus*, 2839.

Ant-life. Myrmecophily.

BOUVIER, 336; BUGNION, 416; DONISTHORPE, 748; FARQUHARSON, African *Lycaenidae*, p. 337, *Cecidomyiidae*, p. 439, 918; FOREL, 980; HARGER, 1194; KRAUSSE, 1592, 1593, 1594; MANN, 1835; STUMPER, Psychology, 2711.

Wasp-life.

BALFOUR-BROWNE, 379.

Bee-life.

BALFOUR-BROWNE, 379; BUTTERFIELD, P[ORRITT], WELCH, p. 399 Naturalist 1922; HENRIKSEN, 1258; JØRGENSEN, 1474.

Termitophily.

BATHELLIER, 164; BRYK, 397; SILVESTRI, 2576; THOMPSON, 2769.

Parasitism.

CRAWLEY and BAYLIS, 618; DEN DOOP, 700a; FAHRINGER, 894; FORD, 979; HAVILAND, 1216; PICARD, 2251; RUSSELL, 2433; THOMPSON, 2771, 2772; VAULX, 2891; WEST, 3028.

Luminosity.

AUE, 80; GERRETSEN, 1078; HESS, 1280; MARCHAND, 1839; VOGEL, 2915.

Sound Production.

BIGLAKE, *Locustidae*, 263; DUDICH, 773; HAUPT, *Cicadidae*, 1210; HEBARD, *Heliocheilus paradoxus*, 1228; HENRY, *Pulchriphyllium crurifolium*, 1263; JORDAN, 1472; KELER, 1498; KINTHAU, 1613; LIENHART, 1718; WILLIAMS, 3948.

Sex-relations.

COLLETT, *Nepa*, 582; DAVIS, 675; HOLLAND, *Calopteryx maculata*, 1309; LAMB, 1638; NOACK, *Syntomis phegea*, 2066; PEACOCK, *Tenthredinidae*, 2188; POULTON, 2297; TRAUTMANN, *Methoca ichneumonoides*, 2819; WHEELER & CHAPMAN, *Diacamma*, 3038.

Oviposition.

ALLEN, *Pyraustomyia peritatis*, 263; BRITTEN, *Simulium*, 369; CHAPMAN, 491; CHEESEMAN, *Rhyssa persuasoria*, 493; PAWAN, *Diptera*, 2183, 2184; POULTON, *Coleoptera*, 2299.

Pupal Habits and Cocoons.

DEEGENER, 692; VANEY & PELOSSE, 2884; ZAVADSKY, *Myrmeleonidae*, 3096.

Food-habits.

BRITTEN, *Coleoptera*, p. 128 Lanes. Ches. Nat. 15; BRUCH, ants, 382; GHESQUIÈRE, *Laemophloeus*, 1087; MORSTATT, Termites, 1971, 1972; WEISS, N. American *Coleoptera*, 3015.

Insects, Plants and Flowers.

BEQUAERT, *Formicidae*, 206; BRYK, ants and *Flute-acacias*, 397; COLLENETTE, 581; HEIKERTINGER, *Derocephis*, 1237; FOLSOM, 975; KNOLL, 1574; KRAUSSE, 1589; ROSEWALL, Yellow Thistle, 2407; TREHERNE, 2826.

Galls.

BAGNALL, 108; BURKHILL, p. 193, WINTER, p. 388, FALCONER, pp. 23, 129, 232, 314, 373, DALLMAN p. 84, Naturalist 1922; CODINA, 575; CRESSON, 619; DALLMAN, pp. 50, 97, Lanes. Ches. Nat. 14 1921; GERHARDT, *Pemphigus spirothecae*, 1077; GERTZ, 1079; HEDICKE, 1235; HOIARD, 1332-1337; JOANNIS, 1424; KINSEY, 1528; McCracken and EGBERT, 1777; PEREZ, 2204; PEYERIMHOFF, 2216; POUTIERS, 2304; ROSS, 2408, 2409; SCHLEICHER, 2470; TROTTER, 2829-2831; WELD, 3022, 3023.

Mimicry. Resemblance. Utility.

COLLENETTE, 580; DONISTHORPE, of Ants, 745; ESAKI, 863; FORD, 978;

GHESQUIÈRE, *Carcinomma astrologus*, 1089; GIACOMELLI, 1090; HEIKERTINGER, in *Hemiptera*, 1240; PLATH, *Bremus fervidus*, 2264; POULTON, 2295, 2300, 2302; REUSS, *Lepidoptera*, 2358; UVAROV, *Tettigoniidae*, 2859; VAN BEMMELLEN, 2870; VAN SOMEREN, 2887; VLADIMIRSKI, 2913.

AETIOLOGY.**Evolution, Selection, Phylogeny.**

VAN BEMMELLEN, 2869, 2870; CRAMP-TON, 605, 606, 607, 610, 611, 612; EZHIKOV, 889; HEIKERTINGER, 1241; JEANNEL, 1404; KARNY, 1490; KENNEDY, *Libellula*, 1505; LENZ, 1692; PICTET, 2254; PONGRÁČ, 2279; REUSS, *Dryas*, 2356; TOWER, 2818; WALKER, 2935.

Heredity.

BATESON and others, 162; BONNIER, 318; BREITENBECHER, 353; BRIDGES, *Drosophila*, 358; CLAUSEN and COLLINS, 529; DONCASTER, chromosomes and sex-determination in *Abracis grossularia*, 743; FISHER, *Drosophila willistoni*, 957; GOLDSCHMIDT, 1125; GOLDSCHMIDT and SAGUCHI, intersex, 1129; GOWEN and GOWEN, *Drosophila melanogaster*, 1135; HAWKES, 1217; HYDE, 1376; LANCEFIELD, 1651; LANCEFIELD and METZ, *Drosophila willistoni*, 1652; MOHR, 1953, 1954; MORGAN, 1961, 1963, *Drosophila*, 1962; MÜLLER, *Drosophila*, 2005; PICTET, 2252; TANAKA, 2753; TIMBERLAKE, *Coleophora inaequalis*, 2793; WAALER, 2924; WINGE, 3057; ZELENY, 3099.

Variation.

BREITENBECHER, 353; BURGEFF, Polymorphism and heredity in *Zygaena ephialtes*, 417; COCKAYNE, 540; HASEBROEK, melanism 1204, 1205; LÉCAILLON, 1668; MÜLLER, 2007; PICTET, 2254; PORRITT, melanism, 2282; POULTON, *Andrena*, 2296, *Cymolhoe theobene*, 2301; STAUDER, 2650.

Hybrids.

HALDANE, 1180; HAWKES, 1217; HORNSTEIN, 1324; NADBYL, 2025; PRACK, 2306; SZULCZEWSKI, 2745.

Gynandromorphs, Intersexes.

COCKAYNE, *Plebeius argus*, 539; GREER, *Euchloë cardamines*, 1152a; JOICEY and TALBOT, 1454; PAYNE and DENNY, *Drosophila melanogaster*, 2185; PERKINS, *Apidae*, 2208, 2209; STAUDER, *Teracolus daira nouna*, 2640; GOLDSCHMIDT, 1126, 1128.

Teratology.

BELLING, *Lepidoptera*, 179; BOUNOURE, *Dytiscus marginalis*, 332; BROWN, 377; CHABAUT, *Onthophagus taurus*, 504, *Pentodon punctatus*, 510; COCKAYNE, *Coenonympha pamphilus*, 542; DONISTHORPE, *Formicidae*, 746; GARRETT, *Leria serrata*, 1058; HAYES, 1218; HOLMBERG, *Cerceris tridentifer*, 1310; LEHIS, 1666; LESTAGE, 1705; LUIGIONI, 1749; PIC, 2229, 2230; PORTEVIN, *Diamesus osculans*, 2284; SCHULZE, 2512.

Fossil Insects.

BAKER, 111; BELL, 176; BOLTON, 314; COCKERELL, 545, 552, 553, 561, 564, 569; COCKERELL and SANDHOUSE, 565; EDWARDS, 806; JEANNEL, 1414; HANDLIRSCH, 1184; HENRIKSEN, 1260; LANGE, 1654; LINGERKEN, fossil chitin, 1690; MEUNIER, 1920; PRUVOST, 2323; ROSENKRANTZ and HENRIKSEN, 2406; SMITS VAN BURGST, 2598; TILLYARD, 2785, 2786, 2790.

GEOGRAPHY or FAUNISTIC.**General.**

KLEINE, *Brenthidae*, distribution, 1536.

Arctic and Antarctic.

COLLIN, *Diptera*, 585.

EDWARDS, *Diptera*, 808, 809.

EWING, *Collembola* and *Acarina*, 886.

MORICE, *Diptera*, 1964.

Spitsbergen, WATERSTON, *Mallophaga*, 2954; CARPENTER, *Collembola*, 448.

Insular (including New Zealand).

Diptera. KIEFFER, 1513.

Atlantic Isles (Canaries and Madeira), *Coleoptera*, JEANNEL, 1410; COCKERELL, 563.

Islds. of Fernando Po, St. Thomé and Principe, JORDAN, *Coleoptera*, 1471.

Bismarck Archipelago, *Coleoptera*, KRIESCHE, 1600; *Diptera*, BECKER, 172.

New Pomerania, *Coleoptera*, WEISE, 1004, 2996; *Diptera*, BECKER, 172.

Krakatau, *Insecta*, DAMMERMAN, 662.

Lord Howe Isld., *Lepidoptera*, TURNER, 2837.

New Caledonia, *Neuroptera*, NAVÁS, 2030; MONTET, *Spilothynnus thalluse*, 1956.

New Hebrides, OHAUS, *Coleoptera*, 2109.

D'Entrecasteaux Islds., *Lepidoptera*, HAMPSON, 1183.

Louisiade Arch., *Lepidoptera*, HAMPSON, 1183.

New Ireland, *Lepidoptera*, JOICEY and TALBOT, 1452.

Caroline Is., *Mallophaga*, UCHIDA, 2842.

Marshall Islands, *Diptera*, BECKER, 172.

Solomon Islds., OBENBERGER, *Coleoptera*, 2088; PROUT, *Eois planifimbria*, 2320.

Society Islands, *Diptera*, ALEXANDER, 33.

Fiji Islds., *Coleoptera*, BLAIR, 286; *Hymenoptera*, BRUES, 386; *Hymenoptera*, LAING, 1634; *Lepidoptera*, MEYRICK, 1931; MUIR, *Derbidae*, 1993; *Coleoptera*, SICARD, 2571; WATERSTON, *Chalcididae*, 2951.

Samoan Islds., *Coleoptera*, FRIEDERICH, 1004; *Diptera*, ALEXANDER, 33.

Juan Fernandez, *Hymenoptera*, ROMAN, 2402; *Lepidoptera*, AURIVILLIUS, PROUT and MEYRICK, 88; *Thysanoptera*, AHLBERG, 14.

Jan Mayen, *Insecta*, BRISTOWE, 363.

Deslacs Island, *Diptera*, BECKER, 172.

New Zealand, general, HUDSON, 1351; *Hymenoptera*, TURNER, 2841; GAHAN, *Rhincopeltella eucalypti*, (*Eulophidae*), 1052; *Lepidoptera*, HUDSON, 1352; MEYRICK, 1926; MYERS, 2023;

PHILPOTT, *Mnesarchaea*, 2222; *Diptera*, ALEXANDER, 24, 36, 40, 43, 44, 45, 46, 47, 48; EDWARDS, 805; MILLER, *Opifex fuscus*, 1939; TILLYARD, *Blapharoceridae*, 2791; TONNOIR, *Nemopalpus zelandicus*, 2803; *Hemiptera*, MYERS, 2021, *Coccidae*, 2022; *Orthoptera*, SHAW, 2557.

Hawaiian Islds., *Coleoptera*, FULLAWAY, 1035; GIFFARD, *Cerambycidae*, 1098; VAN DYKE, 2882, *Apterocyclus honoluluensis*, 2881; *Hymenoptera*, GIFFARD, 1096; ROHWER, *Chrysididae* 2400; TIMBERLAKE, 2792, *Encyrtidae*, 2794, *Chalcididae*, 2795; *Hemiptera*, GIFFARD, *Delphacidae*, 1097; MUIR, *Delphacidae*, 1992, 1994; MYERS, *Siphanta acuta*, 2024; *Dermaptera* and *Orthoptera*, HEBARD, 1229; *Zoraptera*, CAUDELL, 463; Galls, VAN LEEUWEN, 2886.

Palearctic Region.

(a) Collectively.

Coleoptera.

BAROVSKY, *Exochomus*, 149; NETOLITZY, *Bembidium*, 2050a; REITTER, *Helopinae*, 2350, 2351.

Hymenoptera.

MAYER, *Sphcodes* 1922; SKORIKOV, *Bombyliidae*, 2588.

Diptera.

HENDEL, 1252; KRÖBER, *Tabanidae*, 1601; LICHTWARDT, 1714.

(b) Europe, collectively.

Coleoptera.

DODERO, *Dryops*, 740; HOULBERT, 1339.

Hymenoptera.

RUSCHKA, *Chalcids*, 2432.

Diptera.

STEIN, *Anthomyidae* 2655; TONNOIR, 2802.

(c) North Europe and Siberia.

Insecta.

DEMEL, Lake Wigry, 700; TULLGREN & WAHLGREN, Sweden, 2832,

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Coleoptera.

FALKENSTRÖM, Gotska Sandön, Fåröes, 907; SPESIVTSEFF, Sweden, 2628.

Hymenoptera.

DUBOIS, Belgium, 769; HOUSIAUX, Belgium, 1342; JORGENSEN, Denmark 1475; SHESTAKOV, 2566.

Lepidoptera.

KARVONEN & LÖFQUIST, Aaland Is., 1493.

Neuroptera.

LESTAGE, Belgium, 1702.

Diptera.

FORSIUS, Finland *Cecidomyiidae*, 984; LUNDBECK, Denmark, 1753; SHTAKELBERG, Petrograd, *Nematocera*, 2567, *Asilidae*, 2568; SKORIKOV, *Bombyliidae*, 2589.

Hemiptera.

HENRIKSEN, Denmark, *Coccidae*, 1257.

Odonata.

BARTENEV, Stavropol, 154.

Orthoptera.

LESTAGE, Belgium, 1704; PONGRACZ Poland, 2281.

(d) British Islands.

SHEPPARD, *Insecta*, 2563; MORLEY, *Hymenoptera*, 1966; PIERCE & METCALFE, *Tortricidae*, 2255; CHEETHAM, *Ptychoptera*, 495; EDWARDS, *Jassinae*, 817; CRAVEN, Sussex, *Odonata*, 613.

(e) Central and Eastern Europe.

Coleoptera.

AMMANN & KNAB, N. W. Tyrol, 57; BOKOR, N. W. Hungary, *Duvalites*, 306; EVERTS, Holland, 881.

Hymenoptera.

ESBEN-PETERSEN, 871; BLÜTHGEN, Pomeranian Bee fauna, revision of, 295; HEDICKE, Gr.-Machnower Weinbergs, 1232; LEIMINGER, Baden, 1684; MAIDL, Dalmatia, 1797; NOSKIEWICZ, Podolia, 2074, 2075,

Lepidoptera.

CARADJA, Rumania, 442; GILLMER, Saxony, 1103; GRABE, Ruhr district, 1137; JENSEN, Zealand, 1417; MÖBIUS, Saxony, 1951; SORHAGEN, Mark Brandeburg, 2617.

Diptera.

GOETGHEBUER, Belgium, 1122; LEIMINGER, Baden, 1684; NIELSEN, Denmark 2061; PARENT, Belgium, 2148.

Hemiptera.

HOFMÄNNER, Switzerland, 1303; REICHENSBERGER, Germany, 2341.

Thysanoptera.

TÜMPEL, 2833.

Psocoptera.

TÜMPEL, 2833.

Plecoptera.

TÜMPEL, 2833.

Ephemeroptera.

TÜMPEL, 2833.

Odonata.

TÜMPEL, 2833.

Orthoptera.

LEIMINGER, Baden, 1684; TÜMPEL, 2833.

Apterygota.

STACH, N.W. Hungary, 2632.

(f) France.

Coleoptera.

BARTHE, 159, 160, 161; BÉTIS, Rhipiphorides gallo-rhénaens, 244; HOULBERT & MONNOT, 1340; JEANNEL, 1406.

Lepidoptera.

GOUIN, Gironde, 1132; OBERTHÜR & HOULBERT, Rhopalocères armoricains, 2099.

Diptera.

PIERRE, 2258.

(g) South Europe and Mediterranean Basin.

Insecta, collectively.

INNES, 1384.

Coleoptera.

FUENTE, Spain, 1034; IGLESIAS, Spain, 1379; JEANNEL, 1403, 1404, North Africa, 1410; JORDA, Balearic Is., 1459; MATCHA, 1874; THIÉRY, Morocco, *Tenebrionidae*, 2764; WILKE, 3943.

Hymenoptera.

MERCET, Spain, 1911.

Lepidoptera.

STAUDER, Illyro-Adriatic, 2639.

Diptera.

EFFLATOUN, *Syrphidae*, 819.

Orthoptera.

CSIKI, Albania, 632.

(h) Caucasus, West and Central Asia.

PEILE, Mesopotamia, *Lepidoptera*, 2197.

Africa.

Coleoptera.

BERNHAEUER, *Staphylinidae*, 237; GEBIEN, *Tenebrionidae*, 1066; GUESQUIÈRE, *Helopeltis*, 1088; HINTZ, *Cerambycidae*, 1292; KERREMANS, *Buprestidae*, 1508; KLEINE, *Brentidae*, 1533, 1541 LABOISSIÈRE, *Galerucidae*, 1622; MOSER, *Cetoniidae*, 1988; ONAUS, *Rutelidae*, 2114; SCHMIDT, *Callichrominae*, 2491; VOSS, *Rhynchitinae*, 2921; WEISE, *Chrysomelidae* & *Coccinellidae*, 3001; WILKE, 3043.

Hymenoptera.

ARNOLD, *Sphegidae* 72, 73; ENSLIN, *Tenthredinidae*, 862; FRIESE, *Apidae*, 1008, 1015; MEYER, *Sphecoides*, 1922; STITZ, *Formicidae*, 2669; SZÉPLIGETI, *Braconidae*, 2721; WHEELER, *Formicidae*, 3935.

Lepidoptera.

AURIVILLIUS, 90; BETHUNE-BAKER, *Catochrysops*, 242; ELTRINGHAM, *Neptis*, 830; JORDAN, *Ludinae*, 1470; SCHULTZE, 2508.

Diptera.

ENDERLEIN, *Micropezidae*, 847.

Hemiptera.

LEHMANN, *Pentatomidae* 1681; MELICHAR, 1896.

Isoptera.

SJÖSTEDT, 2584.

Odonata.

LE ROI, 1694.

Orthoptera.

REHN, 2337.

Dermaptera.

REHN, 2337.

Protura.

SILVESTRI, 2579.

Madagascar and Mascarene Islands.

Insecta.

HOVARD, Galls, 1334.

Coleoptera.

ARROW, *Erotylidae*, *Endomychidae*, 76; AURIVILLIUS, *Cerambycidae*, 82; BERNHAUER, *Staphylinidae*, 239; FLEUTIAUX, *Melasiidae*, *Elateridae*, 970; GEBIEN, *Tenebrionidae*, 1067; HUSTACHE, *Curculionidae*, 1368; JORDAN, *Anthribidae*, 1468; KLEINE, *Brenthidae*, 1542, 1544; LESNE, *Buprestidae*, 1696; MOSER, 1975, 1982, 1983; PIC, 2226, 2228, 2239, 2240, 2241; SCHENKLING, 2468; SCHMIDT, 2472; SCOTT, 2524, 2525; VOSS, *Rhynchitinae*, 2921; WEISE, *Hispidae*, 2996; WILKE, 3943.

*Hymenoptera.*FRIESE, 1008; WHEELER, *Formicidae*, 3932, 3936.*Lepidoptera.*

ELTRINGHAM, 830; GAEDE, 1046; LE CERF, 1669, 1675; OBERTHÜR, 2096; PROUT, 2316, 2320.

*Diptera.*COLLIN, *Empididae*, 586; LAMB, 1637.*Hemiptera.*LALLEMAND, *Belbina*, 1636.

Asia, Tropical and Eastern.

Insecta.

ESAKI, 865.

*Coleoptera.*SCHMIDT, 2472; VOSS, *Rhynchitinae*, 2920.

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Hymenoptera.

MEYER, 1921.

*Lepidoptera.*FRUHSTORFER, 1031; GRÜNBERG, 1161; HERING, *Chalcosiinae*, 1272; STRAND, 2699; WARREN, 2947.*Trichoptera.*

KUWAYAMA, 1617.

*Diptera.*BECKER, *Dolichopidae*, 172; EDWARDS, 810; ENDERLEIN, *Micropezidae*, 847.*Hemiptera.*GREEN, *Coccidae*, 1150.*Odonata.*

LAIDLAW, 1631.

Formosa.

*Coleoptera.*OHAUS, 2113; BERNHAUER, 234; GESTRO, *Hispidae*, 1084; GILLET, 1101; HAUSER, *Carabidae*, 1211; SCHENKLING, 2465, 2466; ZIMMERMANN, 3101.*Hymenoptera.*

RENGEL, 2352.

Lepidoptera.

PROUT, 2319; STRAND, 2690.

*Diptera.*HERMANN, 1275; OLDENBERG, 2120; RIEDEL, 2366; SACK, *Syrphidae*, 2436.

Asiatic Archipelago.

Java to New Guinea, incl. Philippines.

Insecta.

DAMMERMAN, Krakatau, 662.

*Coleoptera.*FRIEDERICH, 1004; GEBIEN, 1065; GESTRO, Philippine Is., 1080, 1086; GILLET, 1101; HELLER, 1246; HUBENTHAL, 1349; KLEINE, 1533, 1534, 1543, 1544, Philippine *Brenthidae*, 1535; OBENBERGER, 2088; PIC, 2224, 2226; SCHMIDT, 2472; SCHULTZE, Philippines, 2509; VOSS, *Rhynchitinae*, 2921; WEISE, 2997.

Hymenoptera.

COCKERELL, 555; KIEFFER, *Serphidae*, 1523; MEYER, 1921; ROHWER, 2397; VIEHMEYER, 2898.

Lepidoptera.

GRÜNBERG, 1160; HERING, *Chalcosiinae*, 1272; PENDLEBURY, 2198; PROUT, 2321; SEITZ and STRAND, 2534; STRAND, Philippines, 2694, *Liphya*, 2695; WARREN, 2947.

Neuroptera.

NAVÁS, 2033.

Diptera.

BANKS, 122; ENDERLEIN, *Micropezidae*, 847; HERMANN, Formosa, 1275.

Hemiptera.

HORVÁTH, 1329; JACOBI, 1395; KARNY, 1488.

Odonata.

LAIDLAW, 1630.

Australia and Tasmania.

Coleoptera.

CARTER, 449; HILL, 1287; KLEINE, 1545; LEA, 1661, 1662, 1663; OBENBERGER, 2088; WEISE, 2993.

Hymenoptera.

VIEHMEYER, 2898.

Lepidoptera.

MEYRICK, 1931; PROUT, 2321; TURNER, 2836, 2838.

Trichoptera.

TILLYARD, 2782.

Neuroptera.

NAVÁS, 2033; TILLYARD, 2784.

Diptera.

ALEXANDER, *Tipulidae*, 35; ENDERLEIN, *Micropezidae*, 847; HARDY, 1189, 1190, 1191, *Stratiomyidae*, 1192, *Bombyliidae* and *Cyrtidae*, 1193; FERGUSON and HILL, *Tabanidae*, 936; JOHNSTON and TIEGS, 1438; PARKER, 2155; TILLYARD, 2783.

Hemiptera.

JACOBI, 1395; MUIR, 1999.

Thysanoptera.

KARNY, 1492.

Isoptera.

HILL, 1285, 1286.

Orthoptera.

FROGGATT, 1021; SHAW, *Blattidae*, 2557.

North America.

Insecta, collectively.

CRIDDLE, Ontario, (1920) 623, (1921) 624.

Coleoptera.

BEAULIEU, *Eucnemidae*, 167; BEAULNE, 168; GARNETT, *Buprestidae*, 1055; HOPPING, 1317; KNULL, 1577; WILKE, 3943.

Hymenoptera.

BRADLEY, 346; MEYER, *Sphecodes*, 1922; YUASA, *Tenthredinoidea* larvae, 3091.

Lepidoptera.

BARNES and BENJAMIN, 137, 138, 139, 140, 141; BLACKMORE, 280; DRAUDT, 767; MOORE, 1957; SEITZ, 2532.

Diptera.

BECKER, 173; ENDERLEIN, *Micropezidae*, 847; SHANNON, *Syrphidae*, 2553, 2554, 2555; TOTHILL, 2815.

Hemiptera.

DOZIER, 755; JORDAN, *Polyctenidae*, 1461; KNIGHT, 1571; LAWSON, *Cicadellidae*, 1659, *Cicadidae*, 1660; LUNDBLAD, 1754; OSBORN, 2135; PARSHLEY, 2167.

Thysanoptera.

WATSON, Florida, 2965, 2968, 2969, 2971, 2976, 2979, 2980.

Orthoptera and *Dermaptera*.

BUCKELL, 407; HEBARD, 1226.

Protura.

EWING, 887

Central America.

*Coleoptera.*VOSS, *Rhynchitinae*, 2921.*Lepidoptera.*

DRAUDT, 766; SEITZ, 2532.

*Diptera.*BECKER, 173; ENDERLEIN, *Micropezidae*, 847.*Orthoptera.*

HEBBARD, 1227.

Antilles.

Coleoptera.

KLEINE, 1538; PIC, 2226.

Neuroptera.

LACROIX, 1624.

*Hemiptera.*BALLOU, *Dysdercus*, 119; DRAKE, 758; GOWDEY, *Coccidae*, 1135; SCHMIDT, 2473.*Thysanoptera.*

WATSON, 2975, 2981.

South America.

*Coleoptera.*CASEY, *Barinae*, 452; KLEINE, 1533; SCHMIDT, 2472; VOSS, *Rhynchitinae*, 2921; WILKE, 3943.*Hymenoptera.*FRIESE, *Coelioxys*, 1005; HERBST, *Halictus*, 1269; MEYER, *Sphécodes*, 1922.*Lepidoptera.*

DRAUDT, 766; SEITZ, 2532.

*Diptera.*BECKER, 173; BEZZI, *Chiromyza*, 258; ENDERLEIN, *Micropezidae*, 847.*Hemiptera.*PENNINGTON, *Coreidae*, 2202.*Mallophaga.*FERRIS, *Trimenoponidae*, 940.

III.—SYSTEMATIC.

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Malchinomorphus gen. n. near *Malthinus*, *longiceps* sp. n. China p. 31, PIC Echange 38.

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Caenioxylabanus gen. n. near *Caenia*, *diversicollis* sp. n. Madagascar hors-texte p. 13, PIC Echange 38.

Callanganum gen. n. near *Ceratoprion*, *piceum* sp. n. Peru p. 21, PIC hors-texte Echange 38.

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Cartogonum gen. n. near *Idiopteron*, *bernardi* sp. n. Colombia p. 25, PIC hors-texte Echange 38.

Cautiroides atricollis Congo, *lycifformis*, *binotatus* East Africa, *lateniger* Tanganyika, spp. n., p. 7, PIC Mél. Exot.-Ent. 35.—*C. bogorensis* Bogor, *gracilicornis*, *sumatrensis* Sumatra p. 17, *atroscutatus* New Guinea, *nigrocarinatus* Gaboon,

inapicalis, *diversesculptus*, *trimaculatus* Cameroon, *tanganensis* E. Africa, *sibutensis* (with var. n. *atroscutatus*) Fort Sibut, *ingeniculatus*, *diversithorax* Gaboon p. 18, *reductus*, *carnoti*, *gorhami*, *brevinotatus*, *pouilloni*, *scutellaris*, *trinotatus*, *sublineatus*, *minutus*, *sikorai* (with var. n. *quadraticollis*) p. 19, *tananarivanus*, *conicicollis*, *obconicus*, *granulosus*, *subnitidus*, *fuscopubens*, *angulicollis*, *nigricolor*, *gracilicornis*, *chatanayi*, *subreticollis* p. 20 Madagascar, spp. n., PIC hors-texte Echange 38.

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Coloberos costatus sp. n. Java hors-texte p. 13, PIC Echange 38.

Conderis parallelus Java, *diversipennis* China, *lajoyei* Tonkin p. 7, *costatus* Sumatra, *sordidus* Cochinchina, *trinotatus* (with var. n. *reductus*) Burma p. 8, spp. n., PIC hors-texte Echange 37 1921.

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matus, *sapitensis* Lombok p. 1, *guineen-*
sis New Guinea p. 2, spp. n., PIC hors-
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Haplobothris meridanus Venezuela,
gounellei, *robustus*, *elongatus* Brazil,
minutus French Guiana, spp. n., p. 28,
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Idiopleteron signatum, *kourouanum*,
testaccicostatum, *latetestaceum*, *subapi-*
cale, spp. n., South America p. 25, PIC
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Idiopleteron (Falsocaenia subgen. n.)
meridanum, *longehumerale*, *callanganum*,
latefasciatum, *binotaticolle*, *piceum*, *bi-*
coloricolle, *maroniense*, *pauli*, *breveapi-*
cale, *mendesense*, *parananum* p. 24,
prescutellare, *obconicicolle*, *brevinotatum*,
apicicorne (*Lycomorphon* subgen. n.)
elongaticolle, *angusticolle* p. 25, spp. n.
South America, PIC hors-texte Echange
38.

Libnetisia gen. n. near *Libnetis*,
atricornis, *laticollis*, *testacea* India,
curticollis Malacca, *bicoloriceps* Sumatra,
pallidipes Borneo, spp. n., p. 1, PIC
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Libnetomorphus gen. n. near *Plateros*,
cephalotes, *rianganus*, *rouyeri*, *diversi-*
collis Sumatra, *lineolatus* Java, spp. n.
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Linoptes atronotatus sp. n. Peru p. 21,
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Lycomorphon subgen. n. vide *Idiop-*
teron.

Lycoplateros gen. n. near *Mesopleteron*,
mimicus sp. n. Peru p. 22, PIC hors-
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Lycus (Hololycus) rothschildi Bour-
geois 1907, fig. in Voy. M. Rothschild
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Lygistopterus brevelineatus Gaboon,
apicalis Fort Sibut, *reductus* Congo,
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spp. n., p. 20, PIC hors-texte Echange
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n. North Russia p. 58, BAROVSKI Rev.
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Macrolycinella gen. n. near *Lycinella*,
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Macrolycus inaequalis, *diversipennis*,
spp. n., China p. 13 PIC hors-texte
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Mesopleteron longipenne Colombia, *plu-*
rinotatum, *staudingeri*, *scitum*, *carina-*
tum, *minutum*, *unifasciatum* Peru,
bolivianum, *mapiriense*, *unimaculatum*
Bolivia, *longeapicale*, *longissimum* Ecua-
dor, *panamense* Panama, *notaticolla*
Brazil, *baeri* Argentina p. 27, *reductum*,
peruvianum, *inhumerale* Peru, *pro-*
longatum Bolivia, *depressicorne* Vene-
zuela, *grande* Colombia, p. 28, spp. n.,
PIC hors-texte Echange 38.

Metaenus scutellaris Malacca, *lati-*
collis Java, *bipartitus* Sumatra hors-
texte p. 11, spp. n., PIC Echange 37
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Metapteron atronotatum Peru, *apici-*
corne Bolivia p. 25, *geniculatum*,
angustatum, *signaticolle*, *reductum*, *api-*
cale Brazil, *testaceipenne* Cuba, *boga-*
tense Colombia p. 26, spp. n., PIC hors-
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Metricrhynchus enganoensis Engano,
regularis Nias, *notaticollis* Sumatra,
batjanensis, *dohertyi* Batchian, spp. n.,
hors-texte p. 11, PIC Echange 37 1921.—
M. ramicornis p. 2 (fig.), *angustus*, p. 3
spp. n., Queensland, LEA Ark. Zool. 14
no. 11.

Microditoneces gen. n. near *Plateros*,
brevelineatus Banguay, *rubripennis* For-
mosa, *nigrosuturalis*, *humeralis*,
brevesuturalis, *longesuturalis*, *manaen-*
sis, *sirambeus* Sumatra, *nigroapicalis*
Java p. 5, *bogorensis* Bogor, *longipennis*,
sparsecostatus (with var. n. *notuticollis*),
ruficeps, *verticalis*, *corporali*, *longissi-*
mus, *pallidicolor* Sumatra, *tuberculatus*
China, *brevinotatus* Formosa, *peguensis*
India, *minutus* Ceylon, *palawanus*
Palawan, *lateralis* New Guinea, *andaien-*
sis Andai p. 6, *modiglianii*, *lateapicalis*
Sumatra, *niasensis* Nias, *brevocostatus*

vicinus Banguay, *celebensis* Celebes, *elisus* Tonkin, *amplipennis* Saigon, *formosanus* Formosa, *annamitus* Annam p. 7, *spp. n.*, Pic hors-texte Echange 37 1921.

Microlycus *gen. n.* near *Calolycus*, *minutus* *sp. n.* Mexico p. 22, Pic hors-texte Echange 38.

Microplateros *gen. n.* near *Plateros*, *diversithorax* (with *var. n. borneensis*) Sumatra, Borneo, *latithorax*, *dohertyi*, *bruneiensis*, *capucinus*, *martapuranus* Borneo, *balabacanus* Balabac, *spp. n.*, p. 2, Pic hors-texte Echange 37 1921.

Microtrichalus *gen. n.* near *Trichalus*, *singularis* *sp. n.* (? Java) hors-texte p. 9, Pic Echange 37 1921.

Mimoxylobanus *gen. n.*, *angustatus* *sp. n.* Sumbawa hors-texte p. 11, Pic Echange 37 1921.

Odontocerus *diversepunctatus*, *atro-punctatus*, *rouyeri*, *corporaali* Sumatra, *testaceopunctatus* Java, *atrolineatus* New Guinea, *jobiensis* Jobi I., *roomensis* Roon, *celebensis* Celebes, *spp. n.*, hors-texte p. 12, Pic Echange 37 1921.

Planeteros *atriventris*, *soppoensis*, *rectithorax*, *bicoloricornis*, *sibutensis*, *spp. n.*, Africa p. 21, Pic hors-texte Echange 38.

Plateros *semilimbatus* (*crocatu*?) *sub-apicalis* Peru, *inapicalis* Ecuador, *elongator*, *reitteri* Brazil (*ephippiger*? Venezuela), *spp. n.*, *roseicollis* *var. n. sallei* p. 23, Pic hors-texte Echange 38.

Pseudoconderis *gen. n.* near *Conderis*, *gorhami* India, *longipennis* China, *spp. n.*, p. 8, Pic hors-texte Echange 37 1921.

Pseudodontoderus *pulcher* *sp. n.* New Guinea hors-texte p. 12, Pic Echange 37 1921.

Pseudolinoptes *gen. n.* near *Metapteron*, *foveolatus* *sp. n.* Brazil p. 26, Pic hors-texte Echange 38.

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Pyropteris *malaccanus* *sp. n.* Malacca hors-texte p. 13, Pic Echange 38.

Samanga *gen. n.* near *Xylobanus*, *fenestrata* *sp. n.* Celebes hors-texte p. 9, Pic Echange 37 1921.—*S. longicollis* *sp. n.* Celebes p. 22, Pic hors-texte Echange 38.

Stadenus *atripes* Natal, *parallelus* Congo, *spp. n.*, *auberti* *var. geniculatus* *n.* Fort Crampel p. 6, Pic Mélanges Exotico-Entomologiques 35.

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Toliamus *gen. n.* near *Melampyrus*, *diversithorax* Celebes p. 3, Pic hors-texte Echange 37 1921.

Trichalus (*Flabellotrachelus* *sub-gen. n.*) *notatithorax*, *bilineatus*, *spp. n.*, Batchian p. 9, *celebensis* Celebes p. 9, *divaricatus*, *pectoralis* New Guinea, *keiensis*, *multicostatus* Kei Is., *foveolatus* Obi, *sulcaticeps*, *submarginatus*, *atricollis*, *testaceicoxis* Java, *pallens* Celebes, *rubripennis* p. 10, *rouyeri* p. 11 Sumatra, *spp. n.*, Pic hors-texte Echange 37 1921.—*T. placidus*, *basi-pennis*, *spp. n.*, p. 5 (fig.) Queensland, LEA Ark. Zool. 14 no. 11.

Villosotrichalus *gen. n.* near *Trichalus* *reductus* *sp. n.* Andai hors-texte p. 9, Pic Echange 37 1921.

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INCLUDING

ENTEROPNEUSTA AND PTEROBRANCHIA

BY

J. R. NORMAN.

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XIV. REPTILIA AND BATRACHIA

ARRANGED BY

W. L. SCLATER.

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†*Plagiosternum granulosum* skull, HUENE 183 p. 410 figs. 13 25.

†*Plagiosuchus* gen. n. for type *pustuliferus* E. Fraas p. 418 3 figs., *P. pustuloglomeratus* sp. n. p. 425 1 fig., HUENE Acta Zool. 3.

INCERTI SEDIS.

†*Lysorophus* on the palatine arch, WINTREBERT 399.

XV. AVES

ARRANGED BY

W. L. SCLATER, M.A.

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XVI. MAMMALIA

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W. L. SCLATER.

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LIST OF ABBREVIATIONS WITH TITLES OF JOURNALS CONTAINING PAPERS DEALING WITH MATTERS OF ZOOLOGICAL IMPORTANCE.

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- Aarsb. Selsk. Norsk Fiskerier Frem.*, Bergen.—Aarsberetning. Selskapet for de Norske Fiskeriers Fremme. Bergen. — Nor.
- Abh. Ak. Wiss., Berlin.*—Abhandlungen der kgl. Akademie der Wissenschaften zu Berlin. Berlin. — Ger.
- Abh. bayer. Ak. Wiss., München.*—Abhandlungen der bayerischen Akademie der Wissenschaften. München. — Ger.
- Abh. D. Seefischereiver., Berlin.*—Abhandlungen des deutschen Seefischereivereins. Berlin. — Ger.
- Abh. geol. Landesanst., Berlin.*—Abhandlungen der kgl. preussischen geologischen Landesanstalt. Berlin. — Ger.
- Abh. geol. Landesanst., Darmstadt.*—Abhandlungen der grossherzoglich hessischen geologischen Landesanstalt zu Darmstadt. Darmstadt. — Ger.
- Abh. Geol. RchsAnst., Wien.*—Abhandlungen der k. k. Geologischen Reichs-Anstalt. Wien. — Aus.
- Abh. Ges. Wiss., Göttingen.*—Abhandlungen der kgl. Gesellschaft der Wissenschaften zu Göttingen. Berlin. — Ger.
- Abh. Ges. Wiss., Leipzig.*—Abhandlungen der kgl. sächsischen Gesellschaft der Wissenschaften. Leipzig. — Ger.
- Abh. Heidelberg. Ak. Wiss.*—Abhandlung der Heidelberger Akademie der Wissenschaften. Heidelberg. — Ger.
- Abh. Mus. Natk., Magdeburg.*—Museum für Natur- und Heimatkunde zu Magdeburg. Abhandlungen und Berichte. Magdeburg. — Ger.
- Abh. natf. Ges., Görlitz.*—Abhandlungen der naturforschenden Gesellschaft zu Görlitz. — Ger.
- Abh. natf. Ges., Halle.*—Abhandlungen der naturforschenden Gesellschaft zu Halle. Halle. — Ger.
- Abh. nathist. Ges., Nürnberg.*—Abhandlungen der naturhistorischen Gesellschaft zu Nürnberg. — Ger.
- Abh. natw. Ver., Bremen.*—Abhandlungen, hrsg. v. naturwissenschaftlichen Verein zu Bremen. — Ger.
- Abh. natw. Ver., Hamburg.*—Abhandlungen aus dem Gebiete der Naturwissenschaften, hrsg. vom naturwissenschaftlichen Verein in Hamburg. — Ger.
- Abh. Schweiz. Pal. Ges., Basel.*—Abhandlungen der schweizerischen paläontologischen Gesellschaft. Mémoires de la Société paléontologique suisse. Basel und Genf. 4to. — Swi.
- Abh. Senckenb. Ges., Frankfurt a. M.*—Abhandlungen hrsg. v. d. Senckenbergischen naturforschenden Gesellschaft. Frankfurt a. M. — Ger.
- Abh. Ver. Natk., Cassel.*—Abhandlungen und Bericht des Vereins für Naturkunde zu Cassel. Cassel. — Ger.
- Abh. zool. Mus., Dresden.*—Abhandlungen und Berichte des kgl. zoologischen und anthropologisch-ethnographischen Museums zu Dresden. Leipzig. — Ger.

- Abh. Zool. Bot. Ges., Wien.*—Abhandlungen der Zoologisch-botanischen Gesellschaft in Wien. Jena. — Aus.
- Abstr. Papers and Rep. Brighton., Nat. Hist. Soc.*—Abstract of Papers and Report of the Brighton and Hove Natural History and Philosophical Society, Brighton. — U.K.
- Act. Acad. Nac. Cien., Cordoba.*—Actas de la Academia Nacional de Ciencias en Cordoba. — Arg.
- Act. Com. Univ. Dorpat., Tatu (= Dorpat).*—Acta et Commentationes Universitatis Dorpatensis, Tartu (= Dorpat), Esthonia.
- Act. Mus. hist. nat., Rouen.*—Actes du Muséum d'histoire naturelle. Rouen (Seine-Inférieure). — Fr.
- Act. Soc. Chile, Santiago.*—Actes de la Société scientifique du Chile, Santiago. — Chile.
- Act. Soc. Fauna et Fl. Fenn., Helsingfors.*—Acta Societatis pro Fauna et Flora Fennica. Helsingfors. — Fin.
- Act. Soc. helvét. Sci. Nat., Genève.*—Actes de la Société helvétique des sciences naturelles. Genève. — Swi. *vide* Verh. Schweiz. Natf. Ges.
- Act. soc. linn., Bordeaux.*—Actes de la société linnéenne de Bordeaux (Gironde). — Fr.
- Act. Soc. Sc. Fenn. Helsingfors.*—Acta Societatis Scientiarum Fennicae. Helsingfors. 4to. — Fin.
- Act. Univ., Lund.*—Acta Universitatis Lundensis.—Lunds Universitets Arsskrift. Lund. 4to. — Swe.
- Act. Zool., Stockholm.*—Acta Zoologica: Internationell Tidskrift för Zoologica. Stockholm. — Swe.
- Agric. Gaz. Canada, Ottawa.*—The Agricultural Gazette of Canada. Department of Agriculture, Ottawa. — Can.
- Agric. Gaz., Sydney.*—Agricultural Gazette of New South Wales, Sydney. — Australia.
- Agric. J. Ind., Calcutta.*—The Agricultural Journal of India, Calcutta. — Ind.
- Akad. Ert., Budapest.*—Akademiai Ertesítő, Budapest. [Akademischer Anzeiger, Budapest.] — Hun.
- Allatt. Közlem., Budapest.*—Állattani Közlemények, Budapest. [Zoologische Mittheilungen, Budapest.] — Hun.
- Amat. Papillons, Paris.*—L'Amateur de Papillons, Paris. — Fr.
- Amer. Breed. Mag., Washington.*—The American Breeders' Magazine, Washington, D.C. — U.S.
- Amer. Geol., Minneapolis.*—American Geologist, Minneapolis, Minnesota. — U.S.
- Amer. J. Anat., Philadelphia.*—The American Journal of Anatomy, published by the Wistar Institute of Anatomy and Biology, Philadelphia, Pa. [Includes Proc. Ass. Amer. Anat.] — U.S.
- Amer. J. Physiol., Baltimore.*—American Journal of Physiology, Baltimore. — U.S.
- Amer. J. Sci., New Haven, Conn.*—American Journal of Science, New Haven, Conn. — U.S.
- Amer. J. Tropical Med., Baltimore.*—The American Journal of Tropical Medicine, Baltimore Md. — U.S.
- Amer. Midl. Nat., Notre Dame, Indiana.*—The American Midland Naturalist, devoted to Natural History, primarily that of the Prairie States. Published by the University of Notre Dame, Notre Dame, Indiana. — U.S.

- Amer. Mus. Novit., New York.*—American Museum Novitates New York — U.S.
- Amer. Nat., New York.*—The American Naturalist, New York, or Lancaster, Pa., formerly Boston. — U.S.
- Amtl. Ber. Natgesch. Samml., Danzig.*—Amtlicher Bericht über die Verwaltung der naturgeschichtlichen vorgeschichtlichen und volksundlichen Sammlungen des westpreussischen Provinzial-Museums. Danzig. — Ger.
- An. Ac. Cs., Habana.*—Anales de la Academia de ciencias, medicas, fisicas y naturales de la Habana. — Havana, Cuba.
- An. cient. Parag., Puerto Bertoni.*—Anales científicos Paraguayos, Puerto Bertoni. — Paraguay.
- An. Inst. Geol., Mexico.*—Anales del Instituto Geológico de Mexico. — Mex.
- An. Inst. Geol. României, Bucharest.*—An. Institutul Geologic al României. Bucarest. [Annales de l'Institut géologique de Roumanie. Bucharest.] — Rou.
- An. Mus. La Plata, Buenos Aires.*—Anales de Museo de La Plata, Buenos Aires. — Argent.
- An. Mus., Montevideo.*—Anales del Museo nacional de Montevideo, Montevideo. — Uruguay.
- An. Mus. Nac., Buenos Aires.*—Anales del Museo nacional de Buenos Aires. Buenos Aires. — Argent.
- An. Mus. Nac., Mexico.*—Anales del Museo Nacional de Mexico. Mex.
- An. Soc. Cient. Argent., Buenos Aires.*—Anales de la Sociedad científica argentina, Buenos Aires. — Argent.
- An. Univ. Chile, Santiago.*—Anales de la Universidad de Chile, Santiago. — Chile.
- An. Zool. Aplic., Santiago.*—Anales de Zoologica aplicada Santiago de Chile.
- Anat. Anz., Jena.*—Anatomischer Anzeiger. Centralblatt für die gesammte wissenschaftliche Anatomie. Jena. — Ger.
- Anat. Hefte, Wiesbaden* vide *Zs. ges. Anat.*
- Anat. Rec., Philadelphia.*—The Anatomical Record, Philadelphia. (Published by the Wistar Institute of Anatomy and Biology.) — U.S.
- Andvari, Reykjavik.*—Andvari Timarit hins islenzka thjóðvinafjelags. Reykjavik. — Iceland.
- Anex. Mem. Inst. Butantan, S. Paulo.*—Anexos das Memórias do Instituto de Butantan, S. Paulo. — Braz.
- Ann. Acad. Române, Bucuresci.*—Analele Societății Academice Române, Bucuresci (= Bucharest). — Rou.
- Ann. Acad. Sci., New York.*—Annals of the New York Academy of Sciences, New York. — U.S.
- Ann. Acad. Sci. Fenn., Helsingfors.*—Annales Academiae Scientiarum Fennicae, Helsingfors. — Fin.
- Ann. Applied Biol., Cambridge.*—The Annals of Applied Biology. The Official Organ of the Association of Economic Biologists. Cambridge, U.K.
- Ann. ass. nat., Levallois-Perret.*—Annales de l'association des naturalistes. Levallois-Perret. — Fr.
- Ann. biol. lacustre, Bruxelles.*—Annales de Biologie Lacustre, Bruxelles. — Bel.
- Ann. Carnegie Mus., Pittsburg.*—Annals of the Carnegie Museum, Pittsburg. Pa. — U.S.

- Ann. Ent. Soc. Amer., Columbus, Ohio.*—Annals of the Entomological Society of America. Columbus, Ohio. — U.S.
- Ann. Fac. Sci., Marseille.*—Annales de la Faculté des Sciences de Marseille (Bouches du Rhône). — Fr.
- Ann. géol. Balkan., Belgrade.*—Annales géologiques de la péninsule Balkanique, Belgrade. — Servia.
- Ann. Géol. Pal., Turin.*—Annales de Géologie et de Paleontologie (Gregorio), Turin and Palermo. — Ital.
- Ann. Hist.-Nat. Mus. Nat. Hung., Budapest.*—Annales Historico-Naturales Musei Nationalis Hungarici, Budapest. — Hun.
- Ann. Hist. Nat., Paris.*—Annales d'Histoire Naturelle. Paris. 4to. — Fr.
- Ann. Inst. océan., Monaco.*—Annales de l'Institut océanographique de Monaco. Paris. — Fr.
- Ann. Inst. Pasteur, Paris.*—Annales de l'Institut Pasteur. Paris. — Fr.
- Ann. Mag. Nat. Hist., London.*—Annals and Magazine of Natural History, London. — U.K.
- Ann. Museo Civ. st. nat., Genova.*—Annali del Museo Civico di storia naturale, Genova. — It.
- Ann. Mus. Col., Marseille.*—Annales du Musée Colonial de Marseille. — Fr.
- Ann. Mus. Congo, Bruxelles.*—État indépendant du Congo. Annales du Musée du Congo, publiées par ordre du Secrétaire d'état. Bruxelles. 4to. — Bel.
- Ann. Mus., Durban.*—Annals of the Durban Museum, Durban. — S. Afr.
- Ann. Mus. Hist. Nat., Marseille.*—Annales du Musée d'Histoire Naturelle de Marseille. 4to. — Fr.
- Ann. Natal Govt. Mus., Pietermaritzburg.*—Annals of the Natal Government Museum, Pietermaritzburg, printed in London. — S. Afr.
- Ann. NatHist. Mus., Wien.*—Annalen des Naturhistorischen Museums. Wien. — Aus.
- Ann. Paléont., Paris.*—Annales de Paléontologie publiées sous la direction de Marcellin Boule. Paris. — Fr.
- Ann. Queensland Mus., Brisbane.*—Annals of the Queensland Museum, Brisbane. — Queensland.
- Ann. Ramb. Soc., Kilmarnock.*—Kilmarnock Glenfield Ramblers Society Annals. — U.K.
- Ann. Rep. Chester Soc. Nat. Sci.*—Annual Report and Proceedings of the Chester Society of Natural Science, Literature and Art, Chester. — U.K.
- Ann. Rep. Christ's Hosp. Nat. Hist. Soc., Horsham.*—Annual Report of the Christ's Hospital Natural History Society, Horsham. — U.K.
- Ann. Rep. E. Kent Nat. Hist. Soc., Canterbury.*—Annual Report and Transactions of the East Kent Scientific and Natural History Society, Canterbury. — U.K.
- Ann. Rep. Ent. Soc. Ont., Toronto.*—Annual Report of the Entomological Society of Ontario, Toronto. — Can.
- Ann. Rep. Florida Geol. Surv., Tallahassee.*—Annual Report Florida Geological Survey, Tallahassee, Fla. — U.S.
- Ann. Rep. Geol. Comm., Cape Town.*—Annual Report of the Geological Commission, Cape Town. — S. Afr.
- Ann. Rep. N. Staff. F. Cl., Stone.*—Annual report and transactions of the North Staffordshire Naturalists' Field Club and Archæological Society, Stone. — U.K.

- Ann. Rep. Nat. Hist. Soc., Peterborough.*—Annual Report of the Natural History Scientific and Archaeological Society, Peterborough. — U.K.
- Ann. Rep. Proc. Barrow Nat. F. Cl.*—Annual Report and Proceedings of the Barrow Naturalists' Field Club, Barrow-in-Furness. — U.K.
- Ann. Rep. Proc. Bristol Nat. Soc.*—Annual Report and Proceedings of the Bristol Naturalists' Society, Bristol. — U.K.
- Ann. Rep. Proc. Belfast Nat. Hist. Phil. Soc.*—Annual Report and Proceedings of the Belfast Natural History and Philosophical Society, Belfast. — U.K.
- Ann. Rep. R. Cornwall Polyt. Soc., Falmouth.*—Annual Report of the Royal Cornwall Polytechnic Society, Falmouth. — U.K.
- Ann. Rep. Smithsonian Inst., Washington.*—Smithsonian Institution. Annual Report of the Board of Regents, Washington, D.C. — U.S.
- Ann. Rep. Trans. Manchester Microsc. Soc.*—Annual Report and Transactions of the Manchester Microscopical Society, Manchester. — U.K.
- Ann. Rep. Trans. Nottingham Nat. Soc.*—Annual Report and Transactions of the Nottingham Naturalists' Society, Nottingham. — U.K.
- Ann. Rep. Trans. Plymouth Inst.*—Annual Reports and Transactions of the Plymouth Institution, Plymouth. — U.K.
- Ann. Rep. U.S. Nat. Mus., Washington.*—Smithsonian Institution. U.S. National Museum. Annual Report of the Board of Regents of the Smithsonian Institution, Washington, D.C. — U.S.
- Ann. Rep. Wellington Coll. Nat. Sci. Soc.*—Annual Report of the Wellington College Natural Science Society, Wellington Coll. — U.K.
- Ann. Rep. Yorks. Phil. Soc., York.*—Annual Report of the Council of the Yorkshire Philosophical Society, York. — U.K.
- Ann. S. Afric. Mus., Cape Town.*—Annals of the South African Museum, Cape Town. — S. Afr.
- Ann. sci. nat. (Zool.), Paris.*—Annales des sciences naturelles, paraît en deux parties : 1. Zoologie et Paléontologie, comprenant l'anatomie, la physiologie, la classification et l'histoire naturelle des animaux. Paris. — Fr.
- Ann. Scuola sup. agric., Portici.*—Annali della Scuola superiore di agricoltura. Portici. — It.
- Ann. Soc. agricult., Lyon.*—Annales de la société d'agriculture, science et industrie de Lyon (Rhône). — Fr.
- Ann. Soc. ent. Belgique, Bruxelles.*—Annales de la Société entomologique de Belgique. Bruxelles. — Bel.
- Ann. soc. ent., Paris.*—Annales de la société entomologique de France. Paris. — Fr.
- Ann. Soc. géol. Belgique, Liège.*—Annales de la Société géologique de Belgique. Liège. — Bel.
- Ann. soc. géol., Lille.*—Annales de la société géologique du Nord. Lille (Nord). — Fr.
- Ann. soc. linn., Lyon.*—Annales de la société linnéenne. Lyon (Rhône). — Fr.
- Ann. Soc. Palaeont. Russ., Petrograd.*—Annuaire de la Société Paleontologique de Russie, Petrograd. — Russ.
- Ann. Soc. roy. zool. malac., Bruxelles.*—Annales des séances de la Société royale zoologique et malacologique de Belgique Bruxelles. [Comprend Bul et Mém.] — Bel.

- Ann. Soc. sci., Bruxelles.*—Annales de la Société scientifique de Bruxelles (Louvain). — Bel.
- Ann. soc. sci. nat. Acad. bel.-let., la Rochelle.*—Annales de la section des sciences naturelles de l'Académie des Belles-lettres, sciences et arts de la Rochelle (Charente-Inférieure). — Fr.
- Ann. Transvaal Mus., Pretoria.*—Annals of the Transvaal Museum, Pretoria. — S. Afric.
- Ann. Trop. Med., Liverpool.*—Annals of tropical medicine and parasitology. Issued by the Liverpool School of Tropical Medicine. London and Liverpool. — U.K.
- Ann. Univ. Grenoble, Paris.*—Annales de l'Université de Grenoble, publiées par les Facultés de droit, des sciences et des lettres, et par l'école de médecine. Paris. — Fr.
- Ann. Univ., Jassy.*—Annales scientifiques de l'Université de Jassy. Jassy. — Roum.
- Ann. Univ., Lyon.*—Annales de l'Université. Lyon (Rhône). — Fr.
- Ann. Univ. Toscana, Pisa.*—Annali delle università Toscana, Pisa. — It.
- Ann. Zool. Mus. Polon. N.H. Warszawa.*—Annales Zoologici Musei Polonici Historiae Naturalis, Warszawa. — Pol.
- Année biol., Paris.*—Année biologique. Paris. — Fr.
- Annot. Zool. Jap., Tōkyō.*—Annotationes Zoologicae Japonenses. European languages. Tōkyō. — Jap.
- Annuario Museo zool., Napoli.*—Annuario del Museo zoologico della R Università di Napoli. — It.
- Anvari Junta Cienc. Nat., Barcelona.*—Junta de Ciències Naturals. Anvari, Barcelona. — Spain.
- Anz. Ak. Wiss., Wien.*—Anzeiger der Kaiserlichen Akademie der Wissenschaften. Mathematisch-Naturwissenschaftliche Klasse. — Aus.
- Anz. Orn. Ges. Bay., München.*—Anzeiger der Ornithologischen Gesellschaft in Bayern, München. — Ger.
- Aquila, Budapest.*—Aquila, Budapest. — Hun.
- Arb. Anat. Inst. Univ., Sendai.*—Arbeiten aus dem anatomischen Institute der Kaiserlich-Japanischen Universität zu Sendai. — Jap.
- Arb. biol. Anst., Berlin.*—Arbeiten aus der biologischen Anstalt für Land- und Forstwirtschaft (vormals Biologische Abteilung für Land- und Forstwirtschaft am Kaiserl. Gesundheitsamte). Berlin. — Ger.
- Arb. D. Landw. Ges., Berlin.*—Arbeiten der deutschen Landwirthschafts-Gesellschaft. Berlin. — Ger.
- Arb. hirnanat. Inst. Zürich, Wiesbaden.*—Arbeiten aus dem hirnanatomischen Institut in Zürich. Wiesbaden. — Ger.
- Arb. Naturf.-Ver., Riga.*—Arbeiten des Naturforscher-Vereins zu Riga. — Latv.
- Arb. path. Inst., Tübingen.*—Arbeiten auf dem Gebiete der pathologischen Anatomie, u. Bakteriologie aus dem pathologisch-anatomischen Institut zu Tübingen. Braunschweig. — Ger.
- Arb. Zool. Inst. Univ., Wien.*—Arbeiten aus den Zoologischen-Instituten der Universität Wien und der Zoologischen Station in Triest. Wien. — Aus.
- Arch. anat. microsc., Paris.*—Archives d'anatomie microscopique, dir. Ranvier et Henneguy. Paris. — Fr.

- Arch. Anat. Physiol., Leipzig.*—Archiv für Anatomie und Physiologie, Leipzig.
1. Anatomische Abtheilung u. d. T.: Archiv für Anatomie und Entwicklungsgeschichte. 2. Physiologische Abtheilung u. d. T.: Archiv für Physiologie.
— Ger.
- Arch. biol., Liège-Paris.*—Archives de Biologie, Bambeke. Liège-Paris. — Fr.
- Arch. Biont., Berlin.*—Archiv für Biontologie, hrsg. v. d. Gesellschaft naturforschender Freunde in Berlin. Berlin. — Ger.
- Arch. EntwMech., Leipzig.*—Archiv für Entwicklungsmechanik der Organismen. Leipzig. — Ger.
- Arch. Esc. sup. Agric. e Med. vet., Nictheroy.*—Archivos da Escola superior de Agricultura e Medicina veterinaria, Nictheroy. — Brazil.
- Arch. exper. Path., Leipzig.*—Archiv für experimentelle Pathologie und Pharmakologie. Leipzig. — Ger.
- Arch. fisiol., Firenze.*—Archivio di fisiologia, Firenze. — It.
- Arch. ges. Physiol., Berlin.*—Pflüger's Archiv für die gesammte Physiologie des Menschen und der Thiere. Berlin. — Ger.
- Arch. ges. Psychol., Leipzig.*—Archiv für die gesammte Psychologie. Leipzig. — Ger.
- Arch. Gesch. Natw., Leipzig.*—Archiv für die Geschichte der Naturwissenschaften und der Technik. Leipzig. — Ger.
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- Arch. Landesk. Sachsen, Halle.*—Archiv für Landes- und Volkskunde der Provinz Sachsen. Halle. — Ger.
- Arch. Math. Naturv., Kristiania.*—Archiv for Mathematik og Naturvidenskab, Kristiania. — Nor.
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- Arch. Morph., Paris.*—Archives de Morphologie, Générale et Experimentale, Paris. — Fr.
- Arch. Mus. hist. nat., Lyon.*—Archives de Muséum d'histoire naturelle. Lyon (Rhône). — Fr.
- Arch. Mus., Rio de Janeiro.*—Archivos do Museu Nacional do Rio de Janeiro. — Braz.
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- Bul. Soc. Lépidopt., Genève.*—Bulletin de la Société lépidoptérologique de Genève. — Swi.
- Bul. Soc. Med., Jassy.*—Bulletin de la Société des Médecins et Naturalistes de Jassy. Jassy. — Rou.
- Bul. Soc. Nat., Luxembourg.*—Bulletins Mensuels. Société des Naturalistes luxembourgeois. Luxembourg. — Lux.
- Bul. soc. nat. acclim., Paris.*—Bulletin de la société nationale d'acclimatation de France (Revue des sciences naturelles appliquées). Paris. — Fr.
- Bul. soc. philom., Paris.*—Bulletin de la société philomatique de Paris. — Fr.
- Bul. Soc. Port. Sc. Nat., Lisbonne.*—Bulletin de la Société Portugaise des Sciences naturelles. Lisbonne. — Port.
- Bul. Soc. Sci., Angers.*—Bulletin de la Société d'Études Scientifiques d'Angers. — Fr.
- Bul. Soc. Sci., Bucharest.*—Buletinul Societatii de Sciinte din Bucuresti-România. (Bulletin de la Société de Sciences Bucarest-Roumanie) Bucuresci, [Bucharest]. — Rou.
- Bul. Soc. Sci. med. biol., Montpellier.*—Bulletin de la Société des sciences medicales et biologiques de Montpellier. — Fr.
- Bul. soc. sci., Nancy.*—Bulletin des séances de la société des sciences de Nancy et de la réunion biologique de Nancy (Meurthe-et-Moselle). — Fr.
- Bul. soc. sci. hist. nat., Auxerre.*—Bulletin de la société des sciences historiques et naturelles de l'Yonne. Auxerre (Yonne). — Fr.
- Bul. soc. sci. hist. nat., Semur.*—Bulletin de la société des sciences historiques et naturelles. Semur en Auxois (Côte d'Or). — Fr.
- Bul. soc. sci. méd., Rennes.*—Bulletin de la société scientifique et médicale de l'Ouest. Rennes (Ille-et-Vilaine). — Fr.
- Bul. soc. sci. nat., Chalon-sur-Saône.*—Bulletin de la société des sciences naturelles de Saône-et-Loire. Chalon-sur-Saône (Saône-et-Loire). — Fr.
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- Bul. Soc. Sci. Nat., Lausanne.*—Bulletin de la Société vaudoise des sciences naturelles. Lausanne. — Swi.
- Bul. Soc. Sci. nat. Maroc, Rabat.*—Bulletin de la Société des Sciences naturelles du Maroc. Rabat and Paris. — Morocco.
- Bul. soc. sci. nat., Nantes.*—Bulletin de la société des sciences naturelles de l'Ouest. Nantes (Loire-Inférieure). — Fr.
- Bul. Soc. Sci. Nat., Neuchâtel.*—Bulletin de la Société neuchâteloise des sciences naturelles. Neuchâtel. — Swi.
- Bul. Soc. Sci. Seine-et-Oise, Versailles.*—Bulletin de la Société des Science de Seine-et-Oise. Versailles. — Fr.
- Bul. soc. stat. sci. nat. arts ind., Grenoble.*—Bulletin de la société de statistique, des sciences naturelles et des arts industriels de l'Isère. Grenoble (Isère). — Fr.
- Bul. Soc. Stiinte, Cluj.*—Buletinul Societății de Stiințe din Cluj.—Bulletin de la Société des Sciences de Cluj, Roum. — Roum.
- Bul. Soc. Stor.-Scient. Maltese* vide *Arch. Melit. Valetta*.
- Bul. soc. zool., Paris.*—Bulletin de la société zoologique de France. Paris. — Fr.
- Bul. Soc. Zool., Genève.*—Bulletin de la Société Zoologique de Genève. Genève. — Swi.
- Bul. stat. biol. Arcachon, Bordeaux.*—Bulletin de la station biologique d'Arcachon. Bordeaux. — Fr.
- Bul. Tennessee Geol. Surv. Nashville.*—State of Tennessee. State Geological Survey Bulletin. Nashville, Tennessee. — U.S.
- Bul. Terr. Papua, Melbourne.*—Bulletin of the Territory of Papua. Melbourne. — Austral.
- Bul. U.S. Dept. Agric., Washington.*—Bulletin: United States Department of Agriculture, Washington, D.C. — U.S.
- Bul. U.S. Nat. Mus., Washington.*—Smithsonian Institution. U.S. National Museum. Bulletin, Washington, D.C. — U.S.
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- C.R. Assoc. Anat., Paris.*—Comptes Rendus de l'Association des Anatomistes, Paris. — Fr.
- C.R. assoc. franç. avanc. sci., Paris.*—Comptes rendus de l'association française pour l'avancement des sciences. Paris. — Fr.
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- Canad. Entomol., Orillia, Ont.*—Canadian Entomologist, Orillia, Ont. [formerly Toronto], Can.
- Canad. Field Nat., Ottawa.*—Canadian Field Naturalist, Ottawa, Can.
- Canad. Rec. Sci., Montreal.*—The Canadian Record of Science (Organ of the Montreal Natural History Society), Montreal. — Can.
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- Carnegie Inst. Pub., Washington.*—Carnegie Institution Publications. Washington, D.C. — U.S.
- Carnegie Inst. Year Book, Washington.*—Carnegie Institution of Washington. Year Book, Washington, D.C. — U.S.
- Carniola, Ljubjani (i.e. Laibach).*—Carniola, Izvestja Muzejskega drustva za kranjsko [=Mitteilungen des Museal-Vereins für Krain]. Ljubjani (=Laibach). — Yugo Slav.
- Cas. Mor. Mus. Zensk., Brünn.*—Časopis Moravského Musea Zemského. Red. Frant. Rypáček, Frant. Šujan. Vydává Moravská Musejní Společnost Brno [Zeitschrift des Mährischen Landesmuseums, hrsg. von der Mährischen Museums-Gesellschaft. Brünn]. — Checho-Slov.
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- Cellule, Louvain.*—La Cellule. Recueil de cytologie et d'histologie générale. Lierre et Louvain. — Bel.
- Centralbl. Bakt., Jena.*—Centralblatt für Bakteriologie, Parasitenkunde und Infektionskrankheiten. 1. Abth.: Medicinschhygienische Bakteriologie. 2. Abth.: Allgemeine, landw.-technol. etc. Bakteriologie. Jena. — Ger.
- Centralbl. Min., Stuttgart.*—Centralblatt für Mineralogie, Geologie und Paläontologie, Stuttgart. — Ger.
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- Com. Ser. Geol., Lisboa.*—Comunicações da Comissão do serviço geológico de Portugal. Lisboa. — Por.
- Condor, Berkeley, Cal.*—Condor. (Cooper Ornithological Club), Berkeley, Cal. — U.S.
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- Forh. Vid. selsk., Kristiania.*—Fordhandlingar i Videnskabselskabet i Kristiania. — Nor.
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- Glasnik Zem.Muz. Bosn. Herceg., Sarajevo.*—Glasnik Zemaljskog Muzeja u Bosni i Hercegovini. (Anzeiger des Landsmuseums für Bosnien und die Hercegovina.) Sarajevo. — Yugosl.
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